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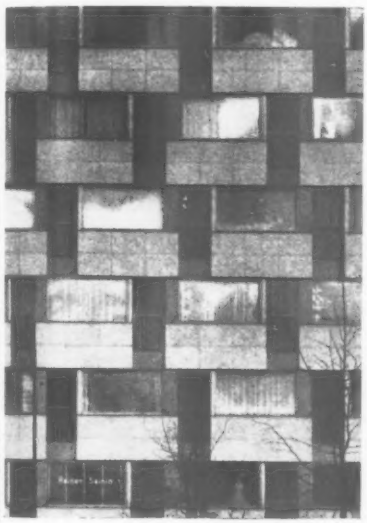
MARGINALIA

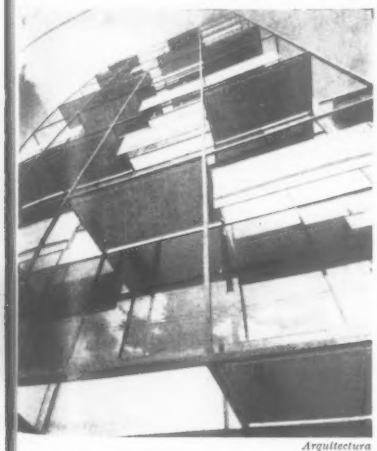
Facade

The range of possibilities facing the contemporary architect when, plan and structure satisfied, he finds himself at the outer skin, is now so vast that façade design is becoming a field where many are tempted to give up choosing and simply order patent-glazing from the catalogue. Concomitantly, however, the rewards for those who do choose a particular solution, and have the talent to realise it, are also considerable. Among recent buildings where the outer skin has been handled with originality and success are a bank-cum-apartment building in Lappeenranta, Finland, by Olli Kivinen, 1, where the elements of the cladding



Arkitekten

—window, balcony-grille, concrete panels—elegantly emphasize that they are only cladding by the way in which their pattern overruns the horizontals and verticals of the

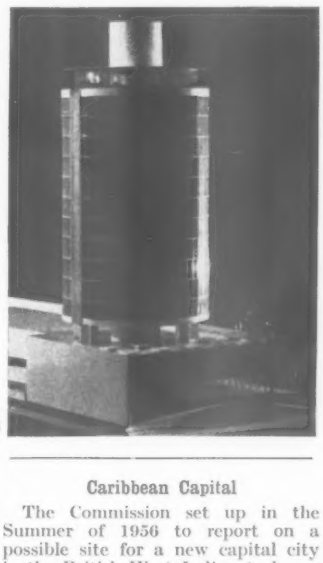


Arquitectura

structure, and an office block in Mexico City by Martinez and Moreno, 2, where the need for sun-protection has resulted, not in a massive egg-crate nor a complication of movable louvres, but in a slender space-sculpture, parsimonious in material, rich in spatial effect.

Crystal Tower

With *fabulous* now as much an everyday term in the description of hotels as it is of clothes and cars, the appearance of the newer luxury hotels all over the world is tending toward more startling silhouettes, more lavish trim, smoother services, more dramatic special features. A lively Commonwealth contribution to the concept of the Hotel Fabulous is this project, 3, for the Crystal Tower Hotel in Melbourne, designed by Kenneth McDonald. Although it is too early to say anything of the services and trim—which, at a building cost estimated at £750,000 for a 110-room hotel, ought to be well in the fabulous class—it is clear that a startling, though perfectly workable, silhouette has been evolved, with the guest-rooms ranged ten to a floor around the circular core of lifts and services, while the special features include not only a rotating cabaret on the roof (some form of rotating accommodation seems almost mandatory for Hotels Fabulous around the Pacific) but also a hundred-foot sweep of glass across the entrance-wall, slightly curved on plan, so that the life of the foyer will be seen—very properly—as in a giant CinemaScope screen.



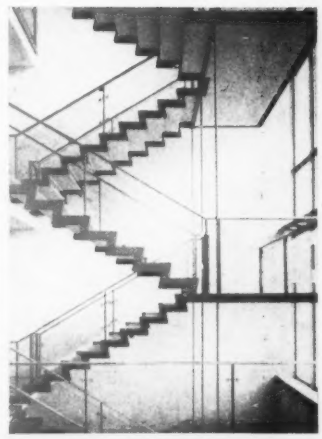
3

Caribbean Capital

The Commission set up in the Summer of 1956 to report on a possible site for a new capital city in the British West Indies, to house the central organs of the Caribbean Federation, has confounded most expectations by settling on Barbados as the most suitable location. The solution proposed smacks of traditional compromise, in that it avoids the direct problems of grafting Federal institutions on to an existing large city like Kingston, Jamaica, or of creating a new city from scratch—and thereby giving an economic boost to a less developed colony. Further, though Barbados is well integrated into the local communications network, it is not very well served for trunk routes going out of BWI to existing capital cities in other parts of the world. The Commission's report (HMSO, 3s.) gives a good picture of the large mass of conflicting pressures to which their deliberations were subjected, but not the ultimate local pressure—the subsequent decision of the federating colonies to have their capital on Trinidad.

Municipal Machine Aesthetic

The problem of 'Character' in functional buildings, raised some 12 months ago by Robin Boyd (AR, Feb. 1956), is sharply rephrased by Arne Jacobsen's new Town Hall for Rodovre, near Copenhagen. Here, for the first time, the elements of a style hitherto associated with the automobile industry (e.g. General Motors Technical Centre, Ford Assembly at Aveley) appear in a building to house a municipal council, 4, complete even to the extensive horizontality and the repetitive patent-glazing of the outer



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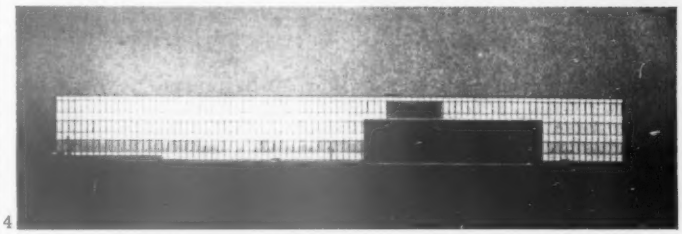


4

Bauen und Wohnen

skin. The use of this ultimately Miesian aesthetic, consistent even to the hairtrigger detailing of the staircase, 5, is as startling in this context as at Hunstanton School, but on closer examination even more arguable. The generalized Miesianism of Hunstanton was, indeed, generalized, and had been developed at IIT for educational buildings, though they differed in function. The machine aesthetic used by Jacobsen has no generalized connotations, it has never been anything but specific, and applied to a limited range of functions, and it will be interesting to see if Rodovre can convincingly render the style more generalized and adaptable to a variety of differing functions.

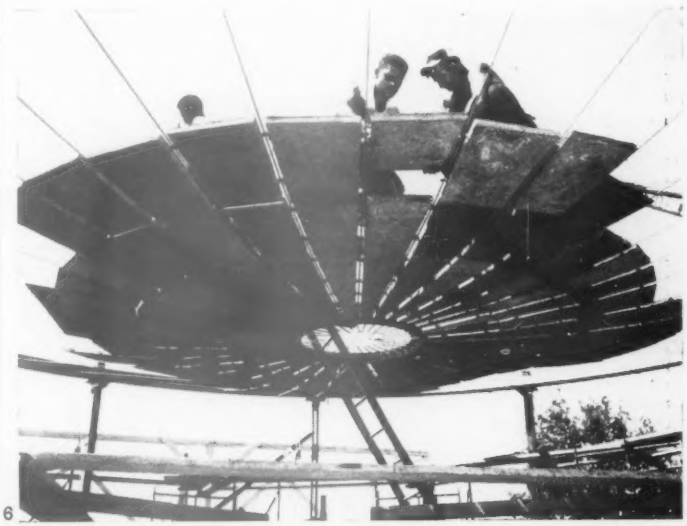
Dome in Tension

Erected by students of the Schools of Architecture and Engineering at Columbia University as a vacation project, and designed by the same students in the preceding spring term, 1956, the Litchfield Dome, 6, is saucer-shaped with an open oculus at its low point and supported at its rim by a laminated wooden ring beam 50 ft. in diameter. Structurally it consists of thirty-six radially disposed steel cables, between which wedge-shaped concrete slabs are hung. In order to prevent wind-flutter and other flexibility risks, the whole structure is rendered monolithic and stable by an ingenious post-tensioning process devised by the Uruguayan engineers Viera and Mondino, in which the structure is first overloaded, to deflect the centre downwards, and the grouts between the slabs are then poured while the structure is in this condition. Once the grouts have set they maintain the dome in the tensioned state even after the overload has been removed.

English Homes Revisited

The second volume* of Christopher Hussey's total overhaul of Avray Tipping's *English Homes* covers the years 1760–1800, somewhat improperly styled *Mid-Georgian*, but currently the most popular period of English domestic architecture. The

* English Country Houses (*vol. II, Mid-Georgian*), *by Christopher Hussey, Country Life, 6 gns.*



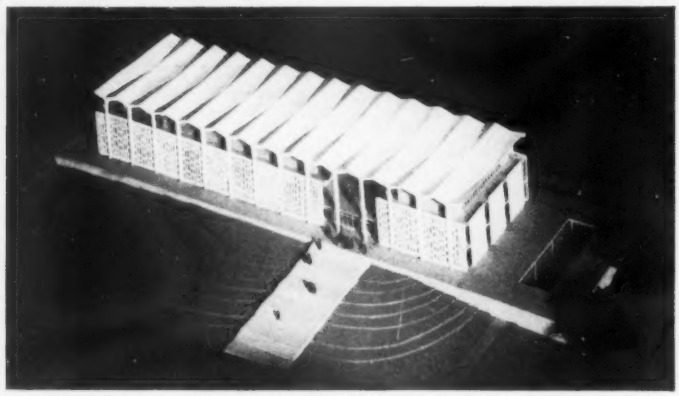
6

change that has come over many aspects of English life, since the relevant volume of Tipping appeared in 1926, is reflected in the title *English Country Houses*, which automatically rings the mental echo *Open to the Public* (and, in fact, most of them are, whether National Trust property or not) and in the style and matter of the text; gone are the dynastic and faintly snobbish connotations of Tipping's word *Home*, replaced by the documented facts and stylistic analyses of the New Art History, with its footnote references to *NBR*, *Summerson*, *Colvin*, and *Gotch*, its niceties of discrimination between the Sublime and the Picturesque. Mr. Hussey has done a massive art-historical labour, and done it well. The book will sell, even at six guineas, because the public that likes Adam has now begun to hear of Henry Holland and Nicholas Revett, and will go a little way out of its way to see their work. But the true monument of these labours will be found, in future, in footnote references to *Hussey, ECH, II, page so-and-so*, for Mr. Hussey is clearly in the midst of what will be a standard work of reference for years to come.

Memphis Fine Arts Centre

The winner of a competition set by the town of Memphis, Tennessee, incorporating an art academy, a theatre and a concert hall for a Fine Arts Centre is the firm of William Mann and Roy Harrover, architects, and Leigh Williams, associate, all aged between 28 and 33. The winner groups the three elements into a high structure, the second prize-winner (A. L. Aydelott and Associates) separates them in individual buildings grouped on a piazza, and the third (Thomas F. Faires and Associates) places them in separate buildings, connected by linking units. In the winning design the art academy is a separate building; its base level houses crafts and shops, with a sculpture court (see 3), administration, exhibition space and a library are on the 'plaza' level, and open studios, divided by movable walls, are on the floors above. The theatre and concert hall share the same stage and auditorium and accommodate, by means of sliding screen partitioning, audiences of 400, 800 or 1,200. Space saved in this combination is devoted to enlarging the lounge, lobby and public space, into which the exhibition area opens.

7, 8



9

Top left and right, south and east elevations respectively and below, model of the winning design for a new fine arts centre in a public park at Memphis.

Talbot Hamlin

Three things must be remembered about Talbot Hamlin, who died in 1956 at the age of sixty-seven.

In the first place he was the recognized authority on the Greek revival in the United States. His book of 1944 is excellent and was followed in 1956 by an equally excellent book on the most brilliant architect America had produced before Richardson, Sullivan and Wright: Benjamin Latrobe.

In the second place he was for many years the Avery Librarian, that is, in charge of the architectural library of Columbia University which is one of the finest, if not the finest, library of architecture in the world and which profited enormously from Hamlin's initiative and scholarship. The librarianship involved a great deal of advising of scholars and students and there must be many who, for the rest of their lives, will remember Hamlin's never ruffled kindness.

Finally he was by no means a scholar only. He could be popular in the best sense as is proved by his one-volume *Architecture through the Ages* (1941), the best ever done in America. And he even could fight for a topical cause especially when he was young. His papers on Art Nouveau published in *The Craftsman* as early as 1902–3 have by now themselves become history.

CORRESPONDENCE

The Great Seal and the Egyptian Revival

To the Editors,

SIRS,—We were very much interested in the article *The Egyptian Revival* by Nikolaus Pevsner, for the reason that we prize Dr. Pevsner's

writings and also because the Newark Library provided the illustration for the County Court House, a reproduction of one of the rare Currier and Ives prints which we were honoured to furnish to THE ARCHITECTURAL REVIEW. It occurs to me that the fashion for the Egyptian style of architecture influenced even the design for the Great Seal of the United States, of which the obverse shows a truncated pyramid—the symbolism being that the unfinished pyramid denotes that following generations must pursue the work yet to be accomplished and also that it leaves room for amendments to the Constitution to rectify the possible errors of the builders! The design for the Great Seal was adopted in 1782 in the full stream of the Egyptian revival.

Let me say also how much we and our visitors enjoy the REVIEW and appreciate its lively and informative articles.

Yours, etc.,
MARCELLE FREBAULT.

The Public Library,
Newark, New Jersey.

The Leine Schloss

To the Editors,

SIRS,—In the November issue of THE ARCHITECTURAL REVIEW appeared an addition by Mr. Bryan Little to my brief note on the Leine Schloss in Hanover. The addition was most welcome as corroborating my main point, the English influence on German architecture. In my contribution I had refrained from giving details, based as they were on the individual taste of one monarch, William IV. Such instances are by no means isolated or merely personal: they testify to a widely prevalent attitude. The so-called English Garden in Munich, inspired by Count Rumford (Benjamin Thompson) is a case in point. Incidentally, George Dance the Younger was commissioned by him in 1791 to supply plans, some of which survive, for a 'Thatched Ice House' for this park. That the great Schinkel visited this country in 1826 and that his work in the Gothic style shows definite traces of English impressions is familiar to everyone. So is of course the fact that after 1842 the church of S. Nicolai in Hamburg was rebuilt by Gilbert Scott in a neo-Gothic style. These few and random examples reveal the ubiquity of English influence in Germany in the late eighteenth and early nineteenth centuries.

Yours etc.,
HELEN ROSENAU.

History of Art Department,
Manchester University.

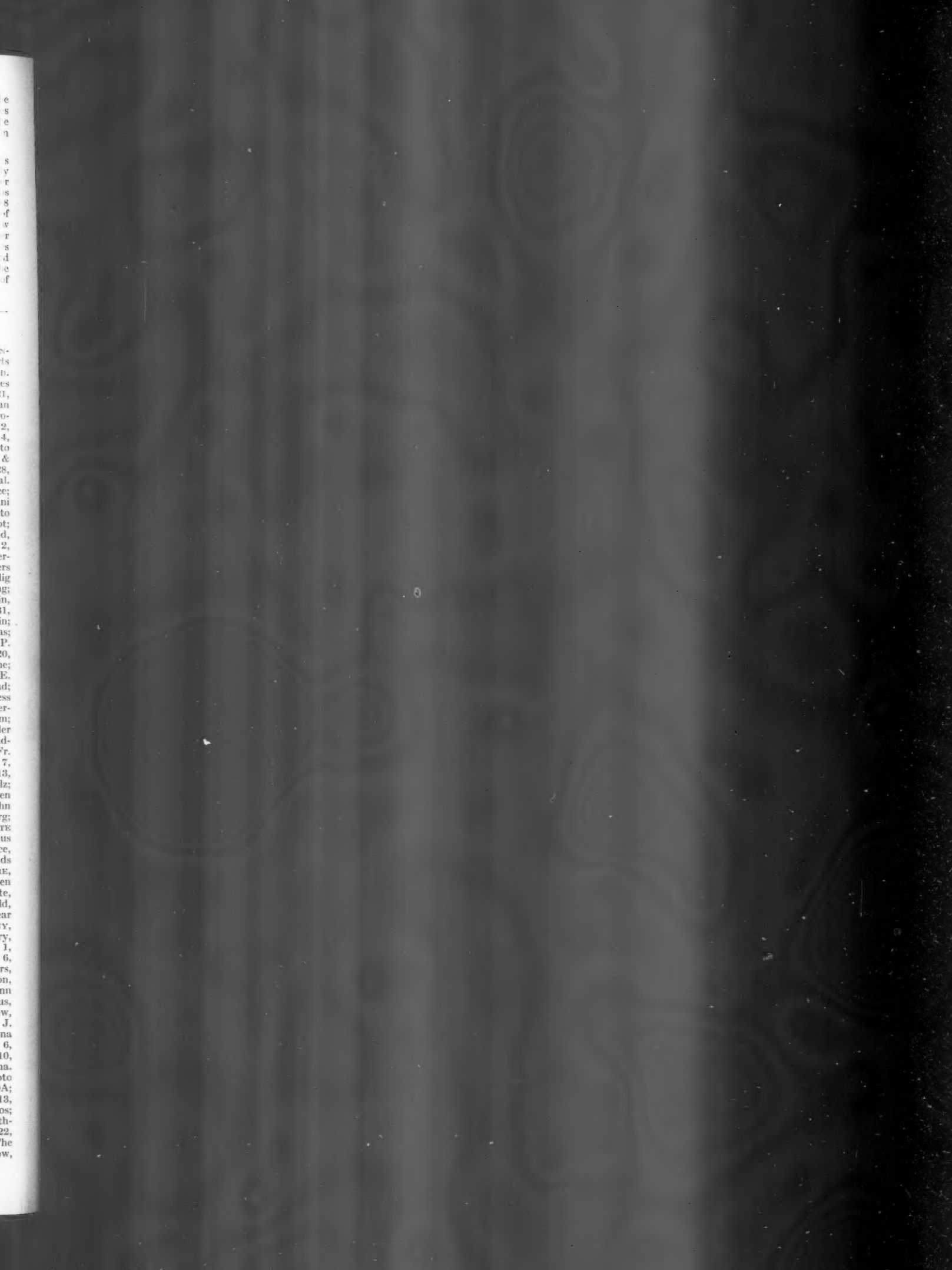
Intelligence

The international competition for the design of a new opera house for Sydney, NSW, has been won by the Danish architect Jorn Utzon. The US group Marzella and Associates were awarded second prize, with the English partnership of Boissevain and Osmund third.

The RIBA hopes to show its exhibition on subtopia very shortly at 66 Portland Place, W.1; after which it will be on tour in various parts of England for about 8 months. The particular object of the exhibition will be to show how the architect can help to counter subtopia; and certain case-histories will be shown of outrages averted or actually destroyed, e.g. the electric pylon in the centre of Woodstock.

ACKNOWLEDGMENTS

COVER: Browne, Arphot. MARGINALIA, pages 151–152: Memphis Arts Centre, Hitchings & Newman. EUROPE REBUILT 1946–56, pages 161–176: France, 1, 4, 17, 18, 21, Robert Browning; 2, 5, 7–9, Jean Hubert; 3, André Claudel; 6, Cherojon and USIA; 10, R. Houette; 12, Drancourt; 13, 'La Cicogne'; 14, USIA; 15, 19, 20, 23, MRU; 16, Photo Industrielle; 22, 29, Biaugeaud & Harang; 26, McCallum, Arphot; 28, Timothy Rendle. Italy, A, Pal. Olivetti, Milan; B, 4, 5, 11, Luce; 3, 12–14, 27, S. Lang; 6, 21, A. Villani & Figli; 9, Marion Johnson; 16, Foto Arte, Livorno; 18, 23, Nairn, Arphot; 19, Fortunati; 20, T. Rendle. Holland, B, McCallum; 1, 17, 18, Nairn; 2, Aerophoto 'Nederland'; 3, Netherlands Govt.; 4, RVD; 5, Spies; 8, Pers Foto Dienst; 10, 22, 29, Bouwkundig Weekblad; 4, Dert; 21, R. Browning; 23, 24, J.G. Van Agtmael. Britain, A, 5, 7, 8, 10, 11, 16, 18, 19, 21, 26, 31, Galwey, Arphot; B, 32, J. R. Pantlin; 1, 3, 4, Entwistle; 2, J. R. Douglas; 9, Ernie Johnson; 12, 13, Dermot P. Fitzgerald; 17, C. Westwood; 20, Shaubert; 22, 25, Reece Winstone; 23, Desmond Tripp; 24, C. & E. Photography; 27, E. R. H. Read; 28, 29, McCallum; 30, Topical Press Agency; 33, Henry Lewes. West Germany, A, 17, 22, 28, 29, McCallum; 1, 15, Presse u. Informationsamt der Bundesgregierung, Bonn; 2, L. Windtosser; 3, 4, Gerhard Schwab; 5, Fr. Griesbaher; 6, Elisabeth Hase; 7, Artur Pfau; 12, Lambert Ridder; 13, Rathschlag; 14, 18, Hugo Schmölz; 19, 21, 23, Archiv des Städtlichen Presseamtes, Hanover; 24, John Gloag; 25, Stadtbauamt Würzburg; 27, Fuchs. GEMOLOGICAL INSTITUTE IN CALIFORNIA, pages 183–185: Julius Shulman. SWITCH ON, frontispiece, page 186, photo Royal Netherlands Embassy. CURRENT ARCHITECTURE, pages 194–198: School in Camden Town, Galwey; Flats in Highgate, J. F. Marshall; Laboratories at Enfield, J. R. Pantlin; Bus Garage near Elstree, J. S. Murray. MISCELLANY, pages 199–204: Genoa Treasury, Marilyn Silverstone. Exhibitions, 1, Sam Lambert; 2, 3, Arts Council; 6, Beaux Arts Gall. SKILL, Interiors, pages 205-208: Entrance at Witton, Galwey; Entrance at Bradford, Mann Bros.; Canopy, etc., at Oxford Circus, Millar & Harris. Design Review, pages 208–210: 1, COID; 2, J. Maltby; 3, Heal & Son; 4, Hygena (J. Maltby); 5, CSA (COID); 6, Leisure; 9, General Electric; 10, Prestcold; 11, Electrolux; 14, Amana. Techniques, pages 210–214: 1, Photo Process Co.; 2, J. Maltby; 4, BEDA; 8, 9, P. W. & L. Thompson; 12, 13, Edward Eves; 15, Chiswick Studios; 17, W. Bullock; 18, Morland Braithwaite; 19, 20, Clifford Studios; 22, Wallace & Gilbett; 24, Barr. The Industry, page 216: Crittall window, J. Maltby.



THE ARCHITECTURAL REVIEW

Volume 121 Number 722 March 1957

The Cover magnifies a part (about one third) of a cartoon by Carl Giles of the *Daily Express*, in order to emphasise his unique command of the elements of a true picturesque vision. Not only does he relish, in detail and at large, such arcadian landscapes as are seen here, with their changes of level, their lush planting and their artful architecture, but his mode of conducting the viewer's eye through its intricacies, its subsidiary scenes, and deep into the picture space, belongs to the picturesque tradition as well. Giles, indeed, is one of the most acute and sophisticated draughtsmen in the field of architecture and topography in England today, and Robert Melville pays tribute to his remarkable abilities on pp. 177-182.

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154 **Frontispiece**

155 **The Revival** *by Peter Ferriday* Whatever else the Gothic Revival in Nineteenth-Century English Architecture may have been, it was the record in stone, literature and litigation of the group-biography of one of the most remarkable sets of personalities that have ever practised or patronised the art of building. Mr. Ferriday, drawing deeply on the abundant, but often obscure, literary sources of the period, reveals a movement of ideas that went beyond the acknowledged heroes—Pugin and the Ecclesiologists—and far deeper into the national life, while it lasted. It was supported by the largest and most intelligent body of lay interest that architecture has enjoyed in this country, it needed a great deal of money, and therefore had to be widely based in society, its architects took themselves seriously as artists, became fanatics for work and for their principles, and squabbled noisily among themselves, with a polemical violence and command of invective that was a lasting embarrassment to the infant RIBA. Its impetus faded as the need to rebuild decrepit churches was satisfied, and as moral and intellectual energy was directed into social, not religious, channels, but the monuments that survive display not only the genius of their designers, but the deficiencies of the civilization that paid the bill.

158 **Europe Rebuilt: 1946-56** *by J. M. Richards* The rebuilding of Europe has now been in progress for a full decade, and although much remains to be done, sufficient has already been done in general to show the quality, or lack of it, of ten years' work. The inescapable conclusion, backed up by pictorial surveys of the average standard of work in individual countries, is that the general quality is a disappointment, and—above all—that what would usually be termed Modern Architecture has failed to become the norm for rebuilding-work, contrary to the expectations that were current at the end of the war. The reasons for this turn of events are complicated, involving national nostalgias, the survival of pre-war personalities, the availability or otherwise of mechanical and industrial resources. But beyond this, it seems, the battle for Modern Architecture may have been far less securely won than appeared to its converts at the end of the thirties, and may still have to be fought, especially at the level of those for whom aesthetics are not the main criterion.

177 **Giles** *by Robert Melville* Among the popular comic draughtsmen currently working for English mass-readership newspapers, Carl Giles is outstanding for the quality of his observation, his ability to marshal a body of (often irrelevant) comic detail, his command of spatial illusion. In this study of Giles's work, Mr. Melville dwells on his mastery of atmosphere, his realism in the creation of comic types and their backgrounds, the effect of his accumulations of comic side-issues, while an illustrated supplement examines Giles's characteristic mode of vision, firmly based in the anti-classical tradition of the Picturesque, closely akin to that of townscape, sensitive to the pleasures of arcadia and the terrors of subtopia.

183 **Gemological Institute in California:** *Architect, Richard J. Neutra.*

186 **Switch ON** *by Michael Regan and Gordon Cullen* It is not economically possible to give Britain the road system it needs in any immediately foreseeable future, and the imperative task of reducing the irritation and frustration to which motorists are subject must be tackled by other means as well as the construction of new highways. The authors examine one of the chief of the accident-causing, efficiency-lowering frustrations—the inability to overtake—and identifies two of its main causes as: parked vehicles at the roadside, and inadequate forward visibility due to undulations and serpentinings of the road itself, and proposes—among other aids—a system of priorities, clearly indicated on the road surface, that would permit overtaking with confidence even where visibility was restricted.

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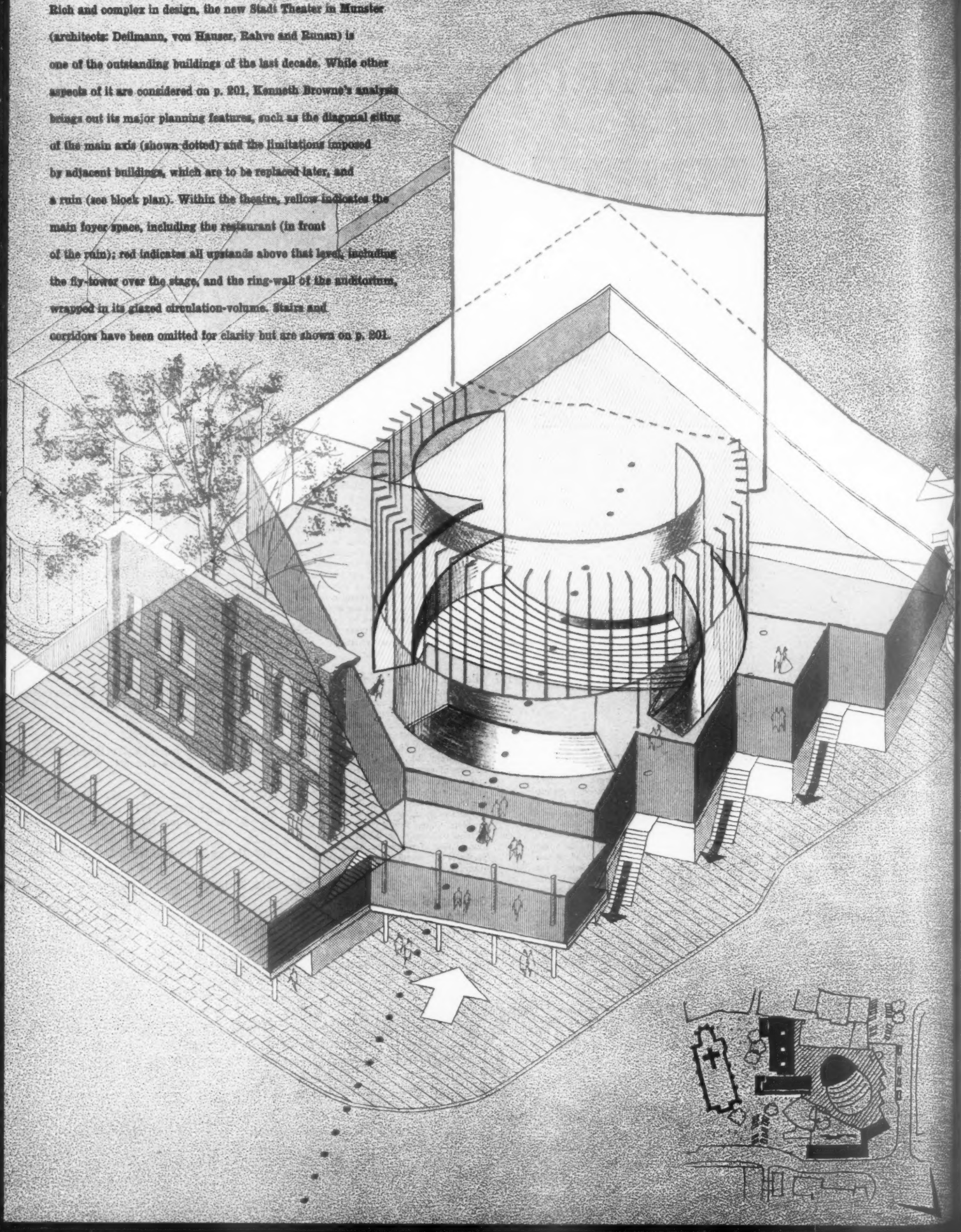
THE ARCHITECTURAL REVIEW

9-13 Queen Anne's Gate, Westminster, S W 1 · Whitehall 0611

FIVE SHILLINGS

Rich and complex in design, the new Stadt Theater in Munster (architects: Deilmann, von Hauser, Rahve and Ruman) is one of the outstanding buildings of the last decade. While other aspects of it are considered on p. 201, Kenneth Browne's analysis brings out its major planning features, such as the diagonal siting of the main axis (shown dotted) and the limitations imposed by adjacent buildings, which are to be replaced later, and a ruin (see block plan). Within the theatre, yellow indicates the main foyer space, including the restaurant (in front of the ruin); red indicates all upstands above that level, including the fly-tower over the stage, and the ring-wall of the auditorium, wrapped in its glazed circulation-volume. Stairs and corridors have been omitted for clarity but are shown on p. 201.



PETER FERRIDAY

THE REVIVAL: STORIES ANCIENT AND MODERN

Pugin, in his *An Apology for the Revival of Christian Architecture in England*, described a cemetery entrance with fine and characteristic dash. 'This is generally Egyptian probably from some associations between the word catacombs which occurs in the prospectus of the company, and the discoveries of Belzoni on the banks of the Nile; and nearly opposite the Green Man and Dog public-house, in the centre of a dead wall (which serves as a cheap medium of advertisement for blacking and shaving-strop manufacturers), a cement caricature of the entrance to an Egyptian temple, 2½ inches to the foot, is erected with convenient lodges for the policeman and his wife, and a neat pair of cast iron hieroglyphical gates, which would puzzle the most learned to decipher; which, to prevent any mistake some such words as 'New Economical Compressed Grave Cemetery Company' are inscribed in *Grecian* capitals along the frieze, interspersed with hawk-headed divinities, and surmounted by a huge representation of the winged Osiris bearing a gas lamp.'

There had been a great falling off. 'Our good old St. Martin's, St. John's, St. Peter's, and St. Mary's Streets, are becoming Belle-vue Places, Adelaide Rows, Apollo Terraces, Regent Squares, and Royal Circuses. Factory chimneys disfigure our most beautiful vales; Government preaching-houses, called churches, start up at the cost of a few hundred each, by the side of Zion chapels, Bethel Meetings, New Connexions, and Socialist Halls. . . . In short, national feelings and national architecture are at so low an ebb, that it becomes an absolute duty in every Englishman to attempt their revival.'

Some of these comments may be exaggerated, some misleading—there are Butcher Rows, Silver Streets, Leather Lanes, Cornhills to be set against the good old saints—but they have a convincing ring. As the picture is built up detail by detail so it is condemned. It is expert journalism very obviously of the Dickens sort. It is also, in message and tone, not unlike the attacks on vulgarity being made by contemporary novelists. 'On my arrival at North Villa I was shown into what I presumed was the drawing-room. Everything was oppressively new. The brilliantly varnished door cracked with a report like a pistol when it was opened; the paper on the walls, with its gaudy pattern of birds, trellis-work, and flowers, in gold, red and green on a white ground, looked hardly dry yet; the showy window-curtains of white and sky-blue, and the still showier carpet of red and yellow seemed as if they had come out of the shop yesterday; the round rosewood table was in a painfully high state of polish.' That is another artist's son, the young Wilkie Collins.

The fusion of Gothic architecture and Christian architecture, and of Classic architecture with the Pagan, was taken none too seriously even by the Gothic men themselves.

'And Gracian, too, he plainly shows
Is wicked and ondacent.
There's not a bit of pious taste
Iver since the Reformation;
'Twas Harry the Eighth, the nasty baste,
That introduced the Gracian."[1]

The confusion of the two things was pointed out forcibly and regularly; Father Newman went so far as, regretfully, to call Pugin a 'bigot.' But if Pugin did not get away with his case entire still a good deal of it was saved. Classic architecture became a symbol if not of irreligion at least of latitudinarianism. It was a 'defunct style, produced at great waste and sacrifice of power and labour, and therefore unsatisfactory to the intelligent mind.' The same possessor of an intelligent mind said that, 'It is impossible not to feel that the great and general interest in art, created by the revival of true principles within the last few years, is a subject of the greatest congratulation to all true artists.' True artists had to mind where they went. 'And is it possible, my readers will exclaim, that you, an architect, can have dared to pass within sight of Vicenza without making long sojourn there to drink in the lessons which the works of your great master Palladio are there to instill! Even so, readers.' Mr. Street was incorruptible. A non-conformist historian of the century writing of the caryatids of St. Pancras church put the whole matter very clearly. 'The architecture of pagan idolatry and the emblems of Greek female slavery were thought fit types for a building devoted to the honour of the true God and "the law of liberty".' The law of liberty! Even so, readers.

Consistently in Gothic revival writing there was an emphasis on the architect as artist; the architect was to remove himself from mercantilism, from bank building, from trade—from vulgarity. No one had a keener eye for vulgarity than Pugin ('advertisement for blacking and shaving-strop manufacturers') and Ruskin. They were for art, the Classic men for commerce, for every-day jobbing work, for rule and not inspiration. They stood for the things of the spirit, the Classic men for the things that could be bought out of their five-percents. And surely they did. It was no mere matter of self-persuasion or conceit. They were the best men, devoted, incredibly hard working. Even an early Revival man, Edward Blore, got locked in a church he was sketching all night. They put their life and soul into the work. Descriptions of Street's office fortunately remain; he worked as no earlier English architect had ever worked and himself designed everything down to the smallest detail. His assistants knew they were not there to amuse themselves but that they were being trained as missionaries. How different the office life of our dear classicist! To a mother enquiring on behalf of her son about the conditions of service in his office Henry William Inwood wrote; 'My office hours are from ten till four, or earlier or later, as my young men find they can conveniently be at the office.' Those two perfect representatives of their schools, G. E. Street and Sir William Tite, illustrate the differences of tone and seriousness. Street had addressed members of the Institute on one of his restorations and had advocated—with historical justifications—the old custom of seating the men on one side, the women on the other. Tite, the chairman, observed that this was 'a little cold, unfriendly, ungallant and unbecoming.' It was much as if one man described somebody as 'saintly' and another replied, 'Oh yes, he's a good fellow.' The Goths were players, the classic men the gentlemen. 'I inherited a fortune, married a fortune and made a fortune,' Tite was reported (on no known authority it must be admitted) to have said to the Prince Consort. 'Lucky man,' the Prince Consort replied.

[1] Quoted from *Pugin*, by Mr. Trappes-Lomax.

Oxford malignants, Cambridge eccentrics

The tragedy and farce of the Oxford Movement, the simple farce of the Cambridge Camden Society are too well known to need any attention here. The Gothic Revival owed little to the Oxford Movement—the Martyrs Memorial was the tenuous link; Mr. Scott and the Rev. Mr. Golightly no doubt had something in common—a distaste for the best? The Camdenians did exert a considerable influence and the Rev. Basil Clarke has excellently described it. They succeeded in establishing some sort of censorship, their pets did well, E. B. Lamb did not. The long chancel, and the choir in it, became accepted as a matter of course; west galleries were out, altar rails in. 'Reverence' became a watchword, table for altar a vulgarism, Perpendicular something to be got rid of.

The Camdenians have had rather more than their due, the county or diocesan architectural societies, which sprung up in the early 1850's, rather less. These societies were in membership less clerical than the Camden Society and much less full of verbiage. Their annual excursions and meetings were splendid affairs arranged with a good deal of ingenuity by honorary secretaries to whom hearty votes of thanks were invariably proposed, seconded and carried by acclamation. The acclamation was well deserved. The secretary fixed the itinerary; train times were consulted, brakes waiting at the station, parsons informed that the society would be visiting their church, dinner arranged at the Crown Hotel. The day began with an 'Early English breakfast.' The cathedral was visited and the works of restoration discussed. After lunch the party set off to visit four village churches, arriving at the last at about 4.30; the secretary made sure that the last visited parson had a remunerative living—the party getting a free tea. After dinner the Society listened to an address of welcome from the mayor who spoke of their 'scientific labours.' There was more church visiting the next morning and then at 1.00 the Elizabethan mansion of Sir Treverton Dalrymple, Bart., was inspected. Sir Treverton and his lady provided the 80 scientists with a 'sumptuous repast.' The scientists acknowledged the free meal with a hearty vote of thanks. More papers in the evening, plans of new churches, submitted to the Society's attention by architects from G. Scott downward, were inspected, the accounts were gone through and signed, and the holiday was over. The honorary secretaries began plotting a route of wealthy clergymen and rich landowners for the next year!

These architectural societies were the backbone of the Revival. Their members knew a great deal about Gothic architecture—probably more than an architect does now—and they knew all about the latest works of Messrs. Street, Butterfield, Teulon and Scott. They subscribed to the *Builder* and *Building News* and kept an eye on churchwardens. Ld. Alwyn Compton, Sir Henry Dryden, Archdeacon Trollope, the Rev. G. A. Poole, and many, many others were inveterate Society men. All the local architects had to be at the ready. Mr. Law had to be able to discourse authoritatively on the churches around Northampton, Mr. Fowler on those in Lincolnshire, Mr. Hopkins on those near Worcester. If they couldn't they would be a few five per cents the poorer. Never before or since had the interest in contemporary architecture been so great, or for that matter so intelligent. The Gothic Revival man could be sure that in every town he worked in somebody would be observing with a keen eye and an informed taste, and that when the Bishop had opened his church a detailed description of it would appear in the local newspaper. There were consolations.

It is sometimes forgotten—and apologists of highchurchmanship tend to obscure the fact—that the church revival cost money. The building of the thousands of new churches, parsonages and church schools was not inaugurated by the Oxford Movement, or by highchurchmen, but in spite of them. The Government had provided some money early in the century to plug the obvious gaps, but it was not until the 1830's when Lord Grey and Lord John Russell reformed the church, overhauled its administration, spread the spoils equitably that churchmen began to feel that they could put their house in order and laymen began to feel that they could contribute without the money ending up as a figure in a bishop's bank-book. Bishop Blomfield[2] was as much the genius of the church revival as Newman or Pusey. From the architect's point of view he was certainly as important—five per cent on a

[2] Sir Arthur's father. Sir Reginald's great-uncle and a 'strong man.' When told that Blomfield had been bitten by a dog George IV asked. 'Which snapped first?' The poor Bishop led a hectic domestic life; being a widower with a family he married a widow with a family. One day Mrs. Blomfield rushed into his study—'Oh, Bishop, quick, quick, there's not a moment to lose! Your children are siding with my children and are murdering our children!' One of the combatants must have been Arthur.

£4,000 church, five per cent on a £1,500 parsonage, five per cent on a £1,000 school. And between 1840 and 1875 twenty-five and a half million pounds were spent on Anglican churches.

scenes from clerical life

How did the Church Revival and its incarnation in stone, wood, mortar and lead begin in the village?

St. Antholin's church in the small town of Tadbrook was urgently in need of repair. A builder estimated the repairs would cost £700, but the churchwardens refused to do anything about it—the church had been good enough for their fathers, it was good enough for them. One stormy night the spire came down and with it the body of the church. The energetic new parson, Mr. Sanderson, had to get the money for a new church. The Church Building Society and the local gentry, only too well informed as to the culpable negligence of the churchwardens, refused to assist. Mrs. Clutterbuck, the local busybody and moneybag, organized—much to Mr. Sanderson's annoyance—a bazaar. But on the very day of the bazaar the neighbouring town of Snobbington was visited by 'Signor Salamandro, the original Babylonian conjurer' with 'his extraordinary performance of thrusting a red-hot poker into a barrel of gunpowder without causing an explosion.' Tadbrook visited Snobbington, the bazaar was a flop. So it came about that Tadbrook had to have a Cheap Church. Nothing deterred, Mrs. Clutterbuck sought out Mr. Compo who had begun his career building for Dissenters; 'So having pleased the Dissenters, by making their conventicles like churches, he was now reversing the experiment, and making his churches like conventicles.' This Compo even went so far as to suggest a portable vase of white Wedgwood for a font! The conventicle-church cost £1,200. And, of course, it was burnt down before it was opened. (The ire of the High Church God?) A young lady—no thrusting Mrs. Clutterbuck, no bazaar bustler, but demure, young, rich—handed over to Mr. Sanderson £6,000, anonymously, on the condition that the church was pewless. The day was saved. (And Mr. Sanderson, he was a bachelor, and the quiet lady—well, who knows?)

The Rev. Francis Paget wrote this charming story in 1841 (Tadbrook in reality was Ladbrook in Warwickshire) and followed it by another on the vicious pew system in which he incidentally disclosed that 'the ringers were in the habit of using the passage round the bell-chamber for the filthiest purposes imaginable.'

a new lamp and bad old days

Two factors are needed in any great movement; an inspiration and something to hate. The inspiration was Newman, the light of the age; the aversion was the eighteenth century. The church revival man delighted in anecdotes to the discredit of his predecessors. The dark ages were (a blind eye turned to the evidence of Richardson and Johnson) very dark indeed. The old parsons were all Port and Paley men, or worse. Every pew had a fireplace and was six feet tall, every wall was patched with bricks, every roof rotten, every spire tottering. Parson Kilvert handed down to posterity the story of communion service at Fordington early in the century. There were two male communicants; when the cup was given to the first he touched his forelock and said 'Here's your good health, Sir.' The second had more orthodox notions, saying, 'Here's the good health of our Lord Jesus Christ.' By repetition of such stories the Revivalists undoubtedly did make themselves feel better every day and in every way. This great satisfaction in the course of events naturally spread to the Gothic Revival. Teulon's first church, of 1846, was described thirty years later, as 'not uncreditable for that remote period, the ecclesiological enlightenment of which was of the twilight of dawn to our present day noon.'

the hour and the man

The Oxford Movement necessarily appealed to the educated, to those with a sense of history. It consequently appealed to many architects, who, if a mixed lot, were to be numbered in the educated; nearly all the distinguished English architects had been and were scholars of some standing, and among the Goths Street showed astounding powers of historical research. The Movement, or the church it did so much to create, found its expression suddenly and completely. 'I will not shrink from uttering my firm conviction that it would be a gain to this country were it vastly more superstitious, more bigoted, more gloomy, more fierce in its religion than at present it shows itself to be.' Thus spoke the Rev. J. H. Newman. And if we were asked to go to a church that appeared to be—in its bricks and mortar that is—a tabernacle of superstition, bigotry, gloom and ferocity, where should we go? Towards Oxford Street. 'For myself I must say that, though I have a rather large acquaintance with English and foreign works executed since the revival of the Pointed art, I cannot hesitate for an instance in allowing that this church is not only the most beautiful, but the most vigorous, thoughtful and original among them all.' G. E. Street's opinion of All Saints, Margaret Street, is still likely to receive general assent, at least as regards the exterior. How powerfully it affected other architects a walk through any town in England (Welwyn and Letchworth, supposing one calls them towns, excepted), will testify. The ceremonial of the church itself, opposed at first so bitterly, spread as fast and as thoroughly, until a décor of a Methodist church of 1890 might have seemed on the flashy side to a high Anglican of 1820. How marvellous All Saints must have seemed at the time, what an infinity for development and invention it offered! In producing a fine building Butterfield appeared to have shown the way to a great architecture. *La littérature engagée* is familiar enough; was not All Saints an example, bearing in mind Newman's words, of *l'architecture engagée*.

a blight on hope!

With Newman and some lesser men gone, with Pusey and Keble having dug in firm it might have seemed possible—indeed it did seem possible—that the Church could be united, or at least keep up a decent pretence in front of strangers. How miserably the hope failed hardly needs going into.

To a low churchman everything seemed the thin end of the wedge. Confession was the thick end of the wedge. Lady poets rose in all their plumage;

'Don't go to confession, oh, never make known
The secrets of others, or even your own
To a man in a clerical hat.'

For some reason the Oxford Movement has been blamed for the ritualists, which is visiting the sins of the sons on the fathers. Purchas, Bennett, Lowther, Mackonochie, especially Mackonochie, the mass in masquerade bunch, the six-candlestick lot, the incense puffers, the genuflectors, the vestment men, they were a new and an alarming breed. Martin Tupper did not like them at all; he warned . . .

'Flirts of the chancel! ye Milliner priests,
Decked in your laces and satin bound hems,
Bringing back Baal's idolatrous feasts,
Bowing and music and flowers and gems,
Firework devices and trumpery wreathes,' etc.

(The 'firework devices' is, one supposes, not to be taken literally.)

This much-divided Church produced an equally divided Gothic Revival. The entry under Wightwick in Mr. Colvin's Dictionary will indicate how precarious the architect's living could be. Street's position was well known; he had set up practice in Wantage 'to be near the Butler circus of highchurchmen ('the wonderful "go" there was at Wantage,' said Charlotte Yonge). The outcry against the Law Courts was at least partly engineered by religious opponents, and the outcry against the Law Courts was the death knell of the Revival.

The squabbling over the height or depth of the church was the perpetual accompaniment of the Revival. There were dangers on either side. When a Cornish parson decided to put spittoons in his church a journalist commented, 'This is an "ornament" certainly unauthorised either by the first prayer-book of Edward VI or any canon or precedent. We trust he may escape the tender mercies of Lord Cairns and the Protestant Association.' That was one side. During the restoration of a 'high' Brighton church one of the workmen got into the pulpit and declared, 'I publish the banns of matrimony between this church and the Church of Rome.' 'And I forbid the banns,' called back another workman. 'On what grounds?' ' 'Cos the parties is too near akin.' That was the other side.

How violent the antipathies were is only too easy to illustrate. Scott's Exeter reredos was chucked out—but at least in an orderly, legal fashion. Later on, at Eccles in Lancashire, law and order went by the board. The vicar wanted to put up an alabaster reredos for the old wooden one. A meeting was called at which the vicar spoke for an hour, denying ritualistic practices, calling himself an Evangelical,[3] and consenting to omit objectionable features. He claimed it had the Bishop's approval. A resolution was moved approving the application for a faculty for the reredos. A counter-resolution was proposed, and the vicar declined to accept it. 'For once I am master here!' he unwisely shouted. Uproar! A flag was hoisted, 'Vote for the Amendment.' The vicar's strong arm men made a rush at the flag and its hoister, but the amenders fought back. Chairs and tables were overturned, and there were bruises all round in the hand-to-hand fighting. The vicar fled to the safety of an ante-room, his opponents triumphantly carried their flag through the streets of the town.

That affair must have warmed the hearts of the Methodists, Roman Catholics and Agnostics.

[3] After 1850 'Evangelical' ceased to have its early Wilberforce-Simeon-Bickersteth connotation.

architect v. architect (and no holds barred)

The greatest of English sociologists, Matthew Arnold, in his examination of the England of his time found an abundance of eccentricity, provinciality, boastfulness, and quarrelsomeness. The deficiency of sweetness and light was nowhere better displayed than in the architectural profession.

It must be admitted that the architect is in a difficult position. He is after all an artist—his stuff (product of mind and learning) is up for sale and therefore up for judgment. No-one is better qualified to judge the work offered than another architect. In literature this has always been a matter of course; a writer is reviewed, and expects to be, by another writer. But writers have no trade union, while the architects have an Institute. If architects belong to one society they must not bang each other about the head in public; it would be bad for trade. As a rule they quickly decided to bang each other about in categories. They wrote about the dead hand of classicism, meaning Smirke, or lunatic Goths, meaning Street and his friends. It was not surprising that criticism fell into the less competent hands of amateurs; men like E. B. Denison who would call a Street a Street.

No doubt, given a lot of good will and a full complement of amenable men, the system could have been made to work. But the Victorians, as Arnold said, were not like that, not in the least. They had a genius for quarrels. Even the blandiloquent Scott quarrelled. Buckler and he had a tremendous set-to; and there was the Foreign Office!

If the amiling Scott could quarrel it was hardly to be expected that the others would refrain. T. H. Wyatt v. Seddon and Pritchard was fairly mild, E. W. Godwin v. all and sundry was rougher. Even the jovial billiard player and President of a Glee Club Sir Arthur Blomfield was forced to show his fangs by Denison. Young Barry v. young Pugin was going too far; young Pugin v. Street was going very far. It was all, of course, aggravated by competitions—could any architect bear to sit back and see his design beaten by another of his designs filched from an earlier work by another architect? It happened to poor Godwin. 'I deny the allegations and scorn the allegators' they all said.

In dealing with quarrels one has to leave the great Street until last. He quarrelled with everybody, furiously. His little leisure must have been wholly spent in penning indignant letters. A Street row was always to the same pattern. His first move was to repudiate the criticism in point of fact; his second letter pointed out that his adversary had failed to answer the points he raised; his third letter showed the discrepancies between the original criticism and his adversaries' third epistle; so it would go on until the editor closed the correspondence—by which time the original subject would have been entirely lost sight of. While he was furiously protesting against repairs being made to St. Mark's he was himself making even more outrageous ones to the fratry of Carlisle Cathedral. Another architect, W. H. Wooler, felt impelled to comment; 'of course, different buildings may require this totally different treatment, but the only difference the average of mortals will be able to see is, that in one case Mr. Street is the architect, and, in the other case, he is not.' However, Street's

great triumph as a controversialist came with the Law Courts. The competition had been hopelessly mismanaged. Young Barry and Street almost got the job together, then Barry was given the task of designing a new National Gallery, and Street left in sole command. No sooner had this been fixed than Ayrton, the First Commissioner, Trevelyan and Bentinck decided that the Law Courts should be on the Embankment. Street's inventiveness did not fail. When his drawings and plans were made he was told—Carey Street! A new set of drawings and plans from the inexhaustible source. (The less-known, but not uninteresting, detail is that as soon as the land was bought hundreds of very poor people were, with hardly any notice at all, ejected from their homes, chucked on to the streets—this was Victorian 'metropolitan improvement'; it was left to American philanthropy to collect the human debris.) While the foundations were being dug Street was hounded by the opposition, by Cavendish Bentinck,[4] by Fergusson (the worst of the lot), by Denison, by Barry, by Pugin, by *The Times*. Some of the criticism was very good, all of it should have been left unsaid. The President of the Institute—T. H. Wyatt—had to deplore the conduct of his professional brethren and warn them that they were bringing the profession into ill repute (and he casually let it be known that he was not satisfied with Street's design!). Street bore it for a long time in silence; in the end he let loose on Fergusson and Barry. The behaviour of the Gothic men was only to be likened to the squabbles of family round the death bed.

Only once did the quarrels rise to wit. After the selection for the Gold Medal had been made (the recipient being presumably one of the trabeated school) William Burges suggested it should in future be shot for by the Artists' Volunteer Rifles. Burges was never quite wholly serious.

The passion for interference in other people's business was well developed in the Goths. Scott could never keep his nose out—and Buckler very properly bit it. Street was a hopeless case, the rest not much better. The perfect example of it—of English hypocrisy too—comes from Gladstone. The copious great statesman wrote remonstratively to the inhabitants of Florence on learning that Montecassino was to be either altered or rebuilt. (Why to the Florentines we do not know, nor alas, what their reply was.) At the time of this sorrowful abjuration Mr. Scott, R.A., had on his warpaint, and Mr. Gladstone did not see fit to send a remonstrance to the Dean of Chester. *Foreign* atrocities were Mr. Gladstone's speciality.

united we stand

The divisions of the Goths have been briefly illustrated, their effects on the profession can easily be guessed. At the height of the Revival—at the height, that is, of the greatest building boom in English history—only one architect in four was a member of the Institute according to one President, one in seven according to Godwin. Amongst the outsiders were many of the best—Pugin had never had any contact with other architects (other than Barry, which is what perhaps put him off), Butterfield, Bodley, Norman Shaw, Nesfield, Webb stayed outsiders. The Institute was an insignificant body. In 1870 its income was only £1,952; the expenses were £1,428, £386 on salaries, £36 on library books. Its librarian was shared with Lambeth Palace. The Institute's money was not wisely spent; the leaders of the profession hoped to dazzle the world with conversazioni—at the 1876 party a band of the Coldstream Guards played—and wasted their resources and impressed no-one.

Some of the architects did their best to make a profession of it—Donaldson[5] amongst others—but they could never get uniformity, agreement or members. The successive Commissioners of Works treated architects like tradesmen, the architects treated each other worse. Ferrey was invited to become a diocesan architect but refused unless he were paid £150 a year for his professional services. Street took the job for nothing. That sort of thing didn't produce brotherly love. Burges produced (E. W. Godwin helping a little) a most magnificent, startling and unlikely design for the Law Courts. Part of it went up as Bradford Town Hall (signed Lockwood and Mawson[6]). That was a very unkind cut from a fellow professional.

Had the architects kept their little differences to themselves things might have been better, but they were notorious. In one legal action involving an architect counsel said that if the client did not behave according to the accepted practice with one architect he would not get another. 'He would get plenty,' interjected the Lord Chief Baron. (On this occasion a journalist provided as a similar case Daniel O'Connell's opinion of his fellow-countrymen. 'If you want to roast one you will get another to turn the spit'.) They could not even keep up the tradition of unopposed elections for the Presidency. Needless to say Street was the culprit there.[7]

It is a curious fact that the reviewing and criticism of new buildings in the technical press was moderate and kind. Mr. Bassett Keeling's St. Mark, Notting Hill, was admittedly described as an 'atrocious specimen of coxcombry in architecture,' an E. B. Lamb design described as a 'nightmare dream,' and Keble College—and there is a touch of genius here—as a 'holy zebra.' But on the whole the critics were kind. The only man to be unpleasant about Scott when he was alive was E. W. Godwin.

a stitch in time

One of the famous if hardly eminent Victorians was Edward Simpson of Whitby. His livelihood was archaeologists. He was known as Flint Jack. His work was the manufacture of flint implements and he was as prolific as Grimes Graves. No doubt many of our museums still display his work. On the whole he was popular enough and there was some indignation at his being condemned to a year in Bedford gaol—of course he was advised to improve his ways of thinking on the works of his famous predecessor there. After this inhospitable reception in the south Jack returned to home grounds only to be caught again. He was given six weeks by the Northallerton Bench in spite of having pleaded that he was 'superannuated with drink.' Soon after that term he was back again. He did reform slightly by selling his frauds as frauds and giving lessons on the art. He then left for Lincolnshire having added to his accomplishments the manufacture of monastic seals. . . .

Messrs. Ashworth, Atkinson, Benest, Blomfield, Brandon, Butterfield, Carpenter, Chancellor, Christian, Clarke, Fowler, Goddard, Gould, Hayward, Kempson, Law, Nicholson, Norton, Paley, Pearson, Phipson, Preedy, St. Aubyn, Scott, Slater, Smith, Street, White and Woodyer were in a trade not dissimilar. They faked Gothic churches and kept out of prison.

A good deal of the restoration was necessary—a great deal more than the S.P.A.B. would admit—and architects did what was necessary. And a little more. Street was once reported as having 'restored the antiquity to the church.'[8] But, whatever one's views on restoration, there was no doubt that the Goths, by excess, created a new and powerful enemy to their cause, and alienated many of their natural following, the clergy. A young clergyman interested in architecture would, about 1840, have joined the Camdenians; forty years later he would have joined the S.P.A.B.

Had it not been for Ruskin the anti-restoration movement might have succeeded earlier, but Ruskin had a way of driving everyone else into the opposite camp. His socialism[9] had come as a terrible shock; it was much as if the Archbishop of Westminster were to advocate common services with the Anglicans. Ruskin's diatribes against restoration produced a flock of pro-restorers. But Ruskin was a genius with a way of his own. Had he not replied to a Sheffield society of artists, which invited him to come and address them, that if they were artists they wouldn't be living in Sheffield. When he was asked to subscribe to the restoration of Warwick Castle he splendidly wrote back; 'I am at this hour endeavouring to find work and food for a boy of seventeen, one of eight people—two married couples, a woman and her daughter, and this boy and his sister—who all sleep together in a room 18 feet square, in the heart of London; and you call upon me for a subscription to rebuild Warwick Castle!' No doubt readers will recall Mr. G. B. Shaw's postcard to the Prime Minister which ended, 'my answer is a hollow laugh.'

decline and fall

The defeat of any great movement is a fascinating study. What were the inherent weaknesses? Who overthrew it? Some of the weaknesses have already been suggested. The Goths were quarrelsome, they were too closely connected with the Church. They had never succeeded in putting down the notion that Gothic was expensive, they had never cut away from archaeologising.

A positive force in the overthrow was R. Norman Shaw, and there is no explaining him. Sir Richard Burton once listed the four great Protestants, explaining what they protested against, and then added his own name as the fifth with the words, 'and Sir Richard Burton, who protested against the whole business.' Shaw 'protested against the whole business.' Shaw had been the young hopeful of the Goths. He had, at an early age, received commendation from Sir George Gilbert. And then he produced his Leadenhall offices; Donaldson called them a 'deformity' and 'an abuse of high powers.' The offices were just the beginning; there came to the astonished eye of the magazine reader a splendid succession of country houses. Here was no tentative experimenting but genius in full flood. The percipient could hardly doubt that the Orders were just round the corner. Burges said that the Queen Anne style of the 'deserters'[10] from the Gothic school' came from three causes; it was easier to design; it required fewer drawings, and was cheaper. Whatever the truth of the matter was there could be no doubt that the hero of the young was no longer G. E. Street[11] but Norman Shaw. There was something about the Law Courts. It was a Pyrrhic victory. The interested went to see it, said 'magnificent,' and, on the quiet, 'never again.' Somehow Street had seemed to have played out the possibilities of Gothic in one shot; it was his greatness to have done so, and perhaps the limitations of his creed to have been able to.

As the Gothic Revival had in its early days been intimately connected with the Church Revival so it was towards its close. For one thing the churches had been built or restored over the forty years. The Revival had lost its impetus. Mr. Mackonochie had at last been ejected, litigation was on the wane, enthusiasm was considerably less. The Churchmen were preparing to admit failure; England wasn't converted or reconverted, the missionaries had been given the cold shoulder or had never even got through the door. The artist is quicker to respond than his fellow men. The 'deserters' from the Gothic school were admitting in their way what churchmen would not or could not concede until 1900. Miss Potter in 1850 might have spent her time embroidering altar cloths and teaching the village children their catechism; Miss Potter in 1890 was busy collecting figures about sweating shops. The local aristocrat (supposing he was not one of the old irredeemable horse, gun and gambling sort) might have built a church, restored another and been chairman at many meetings in aid of good causes; the new leader of society was the Prince of Wales, and sin, only too obviously, was not necessarily ugly. Tempers, where Ireland did not enter the discussion, had improved; the House of Commons even was no longer the scene of 'beastly bellowings.' Harcourt or Balfour never bellowed at anyone. There Matthew Arnold had done his work.

At their best and most representative Gothic revival buildings retain that Victorian quarrelsomeness, violence, assault. All Saints, Margaret Street is still something of an affront; the Law Courts are not restful, Mr. Seddon's work will never tone down. Grace and restfulness they never offered, and at their best they splendidly display, not only the genius of their designers, but the deficiencies of the civilization that paid the bill.

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[4] A man who liked what the Butler saw. A staunch SPAR man he was asked why he then let Branksea Castle become ruinous. He had no answer.

[5] But it was Donaldson who refused to subscribe to the Pugin Memorial Fund. T. H. Wyatt finally loosened Donaldson's grip on the Institute.

[6] 'Messrs. Lockwood and Mawson have been largely engaged in competitions, and we understand that the firm has kept a separate staff for this kind of work.'

[7] The tradition was almost broken when Beresford Hope became the President, but he was conscientious—even if he did doze and nod through the papers—and secured the prefix.

[8] 'Great Britain will tend more and more to become a Free Commonwealth with a Republican Government under Monarchical Forms and a hereditary President.' Horatio Bottomley.

[9] H. G. Wells said that the Webbs' socialism was all offices and no living rooms; Ruskin's and Morris's was all living rooms and no offices.

[10] E. W. Godwin—brought over by beauty—Robson and Stevenson were described as 'secessionists' which conveniently dates them.

[11] How much Street had been the hero of the young can be seen in Gerard Manley Hopkins's letters to Bridges.

The rebuilding of Europe's war-damaged cities has been a deep disappointment to those who, after the war, saw in the process of reconstruction modern architecture's great opportunity. That is the subject of J. M. Richards's article opposite, which is followed by a pictorial survey of the average post-war architecture in Britain and four west European countries. A British example of this lost opportunity is Plymouth. The airview above of the bombed centre after the war shows the extent of the rebuilding and replanning possibilities and the superimposed drawings of typical new Plymouth buildings show their architectural mediocrity and their failure to achieve a common idiom, which is only part of their failure to achieve any kind of coherent relationship to each other.

J. M. Richards

EUROPE REBUILT: 1946-56

WHAT HAS HAPPENED TO THE MODERN MOVEMENT?

It is ten years since reconstruction got under way in the war-damaged countries of western Europe; ten years of building on a greater scale than those countries have ever before experienced. The initial phase can now be said to have ended. Although much remains to be done—although the housing shortage is still nearly as acute in some places as it was at the end of the war, although the cities of the Rhineland still show large areas of devastation and even in Britain, where the extent of damage was less, economic difficulties have slowed up the rebuilding of bombed cities, nevertheless the damaged European towns and cities have, by and large, been rebuilt—at least sufficiently for an appraisement to be made of the architectural results.

We had great expectations of those results, since the war came at a moment when the revolution of the nineteen-twenties and thirties, which aimed at replacing an architecture based on historical precedent by one based on scientific analysis, was rapidly being consolidated. The architect's new concern with social and functional problems and the largely industrialized building techniques he employed to solve them, together with the new visual language he largely derived from these, added up to what was called in the nineteen-thirties the Modern Movement. It was expected that post-war reconstruction would give this movement enormous impetus; in fact that from the first ten years of reconstruction there would emerge a Europe transformed—at least as regards the newer parts—from a scene of confusion, arising from generations of conflicting aims and prejudices, into a scene adorned with a consistent, though perhaps a regionally differentiated, standard of architecture deserving the adjective modern.

Somehow that has not happened. The confusion is still with us. The products of ten years of rebuilding are little different to look at from what they would have been before the war; at least that is the general impression the traveller gets everywhere in

Europe except in western Germany (and to a less extent in Italy), where there has been a change, if not a total transformation. It is time the absence of fundamental change elsewhere was recognized, especially by those accustomed to declare that the battle for modern architecture has been won.

To show the extent to which it has not been won is the purpose of the pages that follow. On them are displayed in sample form a cross-section of the post-war architecture of five western European countries: France, Italy, Holland, Britain and West Germany—as it is, not as the connoisseur of architecture may have been led to suppose it is. For the normal role of this and other architectural magazines is to put on record new buildings of special interest and significance and to pass over as unworthy of attention the buildings of no interest and no significance. Each country of western Europe has produced a number of excellent buildings since the war, and they have been duly illustrated, but the publicity deservedly given to them may easily have created a misleading impression. The test of architectural progress is the ordinary level of building, whether it gets into the magazines or not—and usually it doesn't.

On the following pages it does. The illustrations tell their own dismal story, although they are not designed to give a dismal impression, but a fair summary of the real state of affairs. This cross-section in miniature is by its nature a pictorial one, and indicates only what the eye sees—not the totality of architectural achievement. It may be that in some places and on some occasions progress has been made—for example, in the field of social planning, of accommodation standards or of the economic use of building resources—which is not reflected in the visible result, and for which no credit is given here. Yet by and large it is not unfair to assume that buildings which seem to owe allegiance to a passing epoch possess the attributes of that epoch. Form may not mean much apart from function, but it is a fairly reliable guide to the architect's conception of function.

The following pages are concerned with facts—in most cases ugly, all too visible facts—which require to be put on record to indicate the extent of the challenge that still has to be met by those who believe that modern architecture has an important part to play in raising standards of civilization, both functional and visual. In introducing them it may be permitted to suggest some of the causes that lie behind western Europe's utter failure to seize the opportunities post-war reconstruction offered to it.

The basic causes, no doubt, lie deep among the psychological intangibles: among questions of collective will and national morale, and by proceeding to analyse the varying vitality of nations we could perhaps account, if not for the failures of western Europe as a whole, at least for the far greater degree of failure in some countries than in others. Britain and France are—or behave like—tired countries; Italy and Germany do not, which cannot be explained by the usual cynical observation that the former were the victors and the latter the vanquished, since there is the example of the perennial vitality of the U.S.A.

But such issues are beyond the scope of this article, and we must restrict ourselves to such questions—and such tentative answers—as lie closer to the architectural field. One obvious cause of the absence of boldness and enterprise in the post-war architecture of Europe is the fact that in the political atmosphere engendered by the war the public's instinct lay in the direction of replacing what was there before, and this applied especially where nationalist feeling in the newly liberated countries demanded a style of architecture reminiscent of national tradition. Another is that high quality modern architecture, with its dependence on well finished prefabricated components, needs a mechanized building industry, which in western Europe generally did not exist, or at any rate was not organized to undertake building on a national scale. The result was that the craft-based industries dominated rebuilding, with all the architectural inhibitions that implies—witness the largely traditional style of English housing, which only prevailed after the numerous types of prefab had been discarded because the house-building industry was not organized to take advantage of them.

Thirdly, the bulk of rebuilding work was entrusted to the older generation of architects, and especially those having pre-war commercial or official connections, who had maintained those connections while the younger generation, preoccupied with the war, had little opportunity to establish them. Nor had the younger generation the required experience of building. Although war conditions favour in some ways the introduction of untried ideas, they disrupt at the same time the processes by which the men with untried ideas are normally given their opportunities.

Fourthly, and finally, it may simply be that the modern movement was not as firmly established, nor its principles as well understood, as the progressive architects allowed themselves to believe; that the battle they hoped was won, because of the acclaim they received from the converted, has to be fought again on the level of the aesthetically unconvertible.

There are no doubt other considerations peculiar to individual countries, and some of these are suggested in the comments alongside the pictures. It only remains to add that we are concerned here with buildings and groups of buildings—the form in which the new architecture meets the traveller's eye—and not with the planning schemes that give rise to them. The task of reconstruction has, of course, offered great opportunities for replanning, and many improvements in layout have no doubt been made in rebuilt towns without any visible improvement in the architecture, just as good buildings exist which nevertheless mark lost opportunities to replan. That is another story; yet in a way it is the same story, because if there is one visible symptom of our failure to apply modern architectural principles to the needs of the post-war world it is the obstinacy with which buildings remain individual bits of architecture, instead of linking themselves together into a coherent picture.

1. FRANCE

Because of the presence there of Le Corbusier, a solitary giant, France has acquired a false reputation for being a country with a contribution to make to modern architecture. In fact, France is the most conservative country in Western Europe, with about the same amount to contribute as Portugal. Apart from Le Corbusier's famous Marseilles block, A, and its younger sister at Nantes and his chapel at Ronchamp (all of which are, literally, epoch-making) the post-war buildings of first-rate quality consist of as many apartment or office blocks as can be counted on two hands. The ordinary productions of French architects, in spite of the immense opportunity created by the war, show little advance on what they were producing in the 1930's and little sign of building up a consistent modern idiom. They suggest an absence of purpose and direction, which latter also reflects the extreme provincialism of provincial France. Such sophistication as exists in Paris and the big cities has little influence elsewhere; what it has is seen chiefly in the smart shop-front and the modernistic café and seaside villa. Architecturally, as perhaps one should expect in a country of which large areas are still quite unindustrialized, the smaller places are self-contained and self-sufficient, and what changes there are are changes of fashion rather than of ideals and principles.

A, flats at Marseilles by Le Corbusier.

At the end of the war France possessed one great architectural figure besides Le Corbusier: the veteran Auguste Perret (obit. 1955), and he was put in charge of war-damaged Le Havre. The result is one town with a new centre dominated by rigorously disciplined and elaborately modulated architecture. Although the classical precepts with which Perret was chiefly concerned in his old age are more in evidence than the structural experiments he pursued in his youth, and Le Havre, 1, therefore pushes forward no frontiers, it is still the one town in France where a consistent architectural character has emerged from post-war rebuilding.

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Far more typical of the war-damaged towns of France is Amiens, which is illustrated by a number of pictures, 2-9, just because it is so typical. What is to be seen there is to be seen anywhere in northern France. There is no discipline and—in case that may be thought forgivable in a city with such picturesque tradi-

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tions—no character; instead, a purposeless mixture of styles and architectural attitudes. 2 is a typical street view with a building loaded with period motifs on the left and, on the right, a watered-down, partly modernized, version of standard French neo-classical street architecture. 3 is another example of an orthodox classical style brought up to date by leaving off some of the ornament and playing about with the proportions. Other buildings display instead the modernistic clichés, 4 and 5, without giving much evidence of the modern constructional methods that can be presumed to have been employed. Modernistic clichés, perversely enough, are commonest in the bombed areas closest to the cathedral.

Sometimes the formless architecture of compromise at least possesses a clumsy simplicity, 6; and sometimes when the occasion is a monumental one a famous architect is given an opportunity which, in an age and country possessing some convictions, might have made architectural history; but the mediocrity of the tour Perret, 7, shows that it is chiefly the effect of rhythmic repetition which gives distinction to the same architect's work at Le Havre. Often the attempt to manufacture architecture results in a fussy pretentiousness, 8. Most typical of all, perhaps, is the negative timidity of 9, which might equally well be in Orléans or Lyons—or, for that matter, in Southampton or Rotterdam or Genoa or Cologne. It belongs nowhere and is going nowhere.

To show that Amiens is not alone among the reconstructed towns of northern France for mediocrity of architecture and for the variety of styles favoured, here are three examples from Calais: 10, reminiscent-fantastical, with utilitarian-traditional in the background; 11, domestic monumental (like a 1900-ish golf-course hotel somewhere in Scotland, though in fact, it is a brand new block of flats); 12, the magpie collection of motifs that has always been typical of the French seaside. A similar state of affairs is evident in Beauvais (13, a modernistic front superimposed on an ordinary pre-war street façade), in Aunay (14, village housing in a cautiously reminiscent style) and in Lisieux (15, high-density town housing). This last, with its staccato window-pattern and layers of contrasting material, could not, perhaps, be anywhere but in France; but there is also plenty of anonymous, borough-engineer-style, mass housing in the neighbourhood, of the type of 16 (which happens to be at Le Havre) in which semi-industrialized methods of building are used to produce nothing more adventurous than an enlarged version of traditionally built cottage housing, which might be anywhere between Glasgow and Naples.

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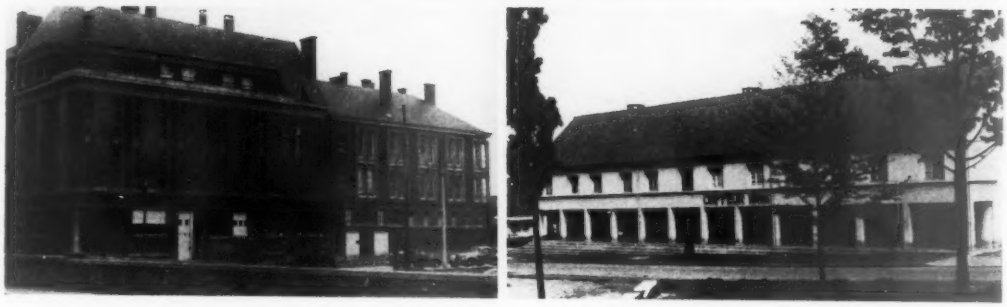

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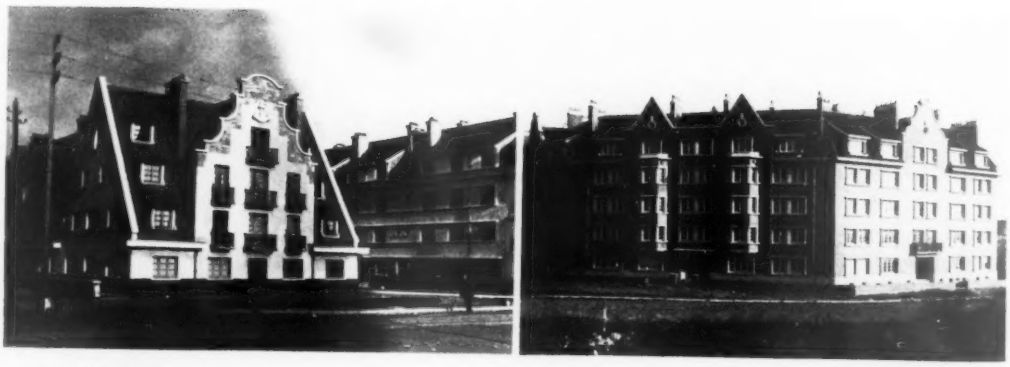

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Housing outside the bigger towns is not unfairly represented by the next four pictures: mixed terrace flats and houses on the outskirts of Roubaix, 17 (equally depressing both as town-planning and as architecture); smugly conventional municipal flats, also at Roubaix, 18; municipal cottage housing at Grand-Couronne, 19; another municipal housing scheme, with rather more forward ideas about planning oddly at variance with its backward ideas about architecture, at Sotteville-les-Rouen, 20.

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In eastern France the opportunities were less and the sheer silliness of some of the Normandy rebuilding less in evidence. The commonest type of rebuilding here is a clumsy and superficial modernistic, as at Maubeuge, 21, which is only sometimes relieved by isolated buildings (like this block of flats at Strasbourg by Beaudouin, 22) where a good architect has concerned himself with the principles of modern architecture rather than with style.

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In central France, too, the heavy-handed, watered-down classical (municipal flats at Orléans, 23) or the cautiously traditional (Place de la Résistance, Tours, 24), are more characteristic than the occasional praiseworthy excursions into a frankly modern idiom (25, shops and a cinema at Nantes; 26, fire-station at Bordeaux). On the west coast, too, there is one heavily war-damaged town, Royan, where the style of rebuilding is contemporary. The use of that style may be slapdash and superficial (27 is typical) and in many cases may consist only of contemporary clichés applied to conventionally conceived structures. But here at least there is awareness of a new era of architecture.

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In the extreme south, an even more favourable impression is given by the circumstance that, although there is plenty of mediocre building, the only large areas of reconstruction are the water-fronts of the various Mediterranean ports—Marseilles,

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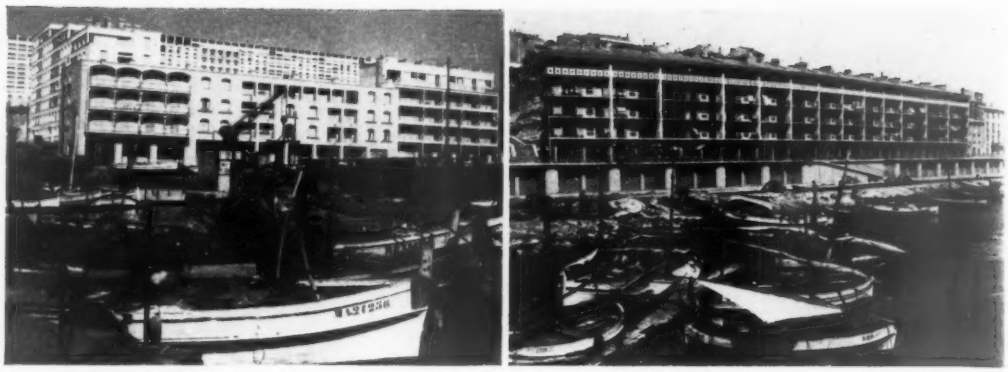
1. FRANCE

Toulon and the rest. Whether the reason is the influence of nautical functionalism, the tradition of simplicity that belongs to the sunny climate of the south or merely the chance or deliberate appointment of more go-ahead architects, this highly concentrated housing and commercial development (Marseilles, 28; Sète, 29) belongs unmistakably to the generation that built it. The architectural quality varies, but criticisms here must chiefly be made on planning grounds and on the basis of an evident insensitiveness to the subtleties of place.



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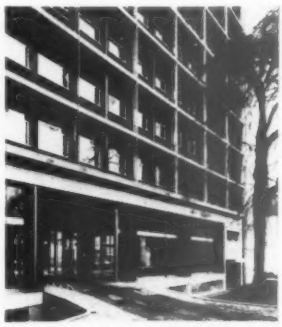
2. ITALY

Italy shows much more vitality than France; more willingness to experiment, and therefore far less dreary reminiscence of pre-war—and even pre-first world war—routines. The new buildings benefit from the same advantages as the French Mediterranean ports, and all over Italy the predominance of white walls with sharply cast shadows gives the traveller from the north an impression of modernity which does not always survive close inspection. In addition, the Italians have an instinctive sense of form which often brings to conventional and commonplace buildings some of the qualities that in other countries have only been reintroduced by the efforts of the modern architects. Nevertheless there is a large quantity of work that shows little awareness of modern ideas and opportunities to set against the good modern architecture that Italy has begun to produce in greater quantities since the war. The best of this is to be seen in Milan (where a number of high quality flats and commercial buildings have gone up, A) and Genoa; though the most distinguished post-war building is probably the new railway station in Rome, B. The more conventional building does not generally involve historical reminiscence so much as either a fanciful modernistic or some variation of the simplified classical that was the official style during the fascist regime.*

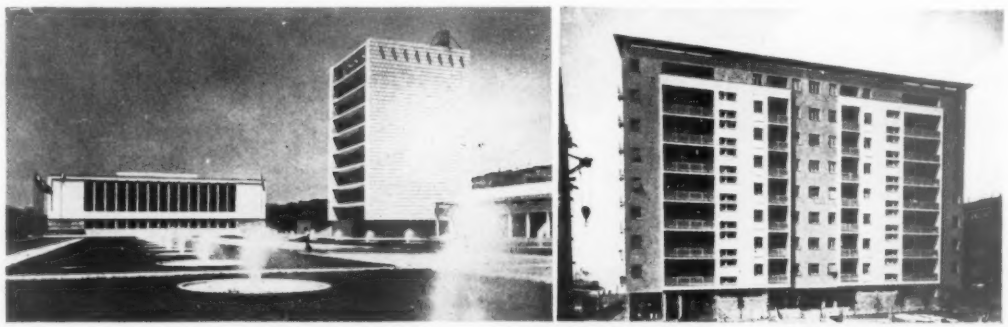


A, Olivetti building, Milan, by Bernasconi and others.

B, Rome railway station, by Calini and others.

*It should be added that the pictures below cannot be compared exactly with those chosen to represent the other countries discussed on these pages, because in Italy war damage was more scattered and did not in the same way affect the big urban centres, where most building naturally takes place. They illustrate post-war rebuilding generally rather than the reconstruction of war damaged areas.

The first two pictures, both from Naples, represent two styles of design frequently found in post-war Italian architecture: 1, a survival of the imposing, somewhat theatrical style, with a hankering after classical formality, of Mussolini's Italy (this is a group of permanent exhibition buildings); 2, multi-storey private-enterprise housing that is modern only in the sense that no period motifs are



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employed. 3, at heavily damaged Rimini, is even more typical of the run-of-the-mill, four-square, unfussy but somewhat characterless housing to be seen all over Italy.

The state-subsidized working-class housing has much the same character, and tall blocks of these stand up in many places in alarmingly close-packed ranks: 4, Foggia; 5, Chieti (Abruzzi). Village housing, especially in the south, has a more sympathetic character and, though largely traditional in conception, a surprisingly modern one when it relies on the simple geometrical forms of the local vernacular: 6, San Benedetto Val di Sambro (Bologna); 7, La Martella (near Matera).

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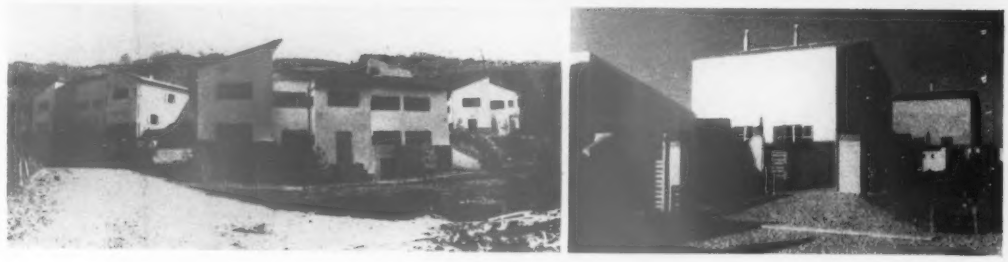

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Simple geometry can also be brutal and insensitive, especially when allied with harsh contrasts of material, as in this typical provincial school at Sassari (Sardinia),8. There is a rather greater appearance of sophistication in the simplicity of 9 (school at Ancona) and 10 (municipal offices at Lecce), but it consists only of a stylish veneer applied to a conventional street-façade. Once again, there are vestiges also of the heavy neo-classicism of the fascist era. The same applies to this church at Francavilla al Mare (Chieti), 11, which is typical of a certain type Italian rebuilding in that it preserves the skeletons of period styles, but discards the detail (and often the proportions as well) that gave them their character.

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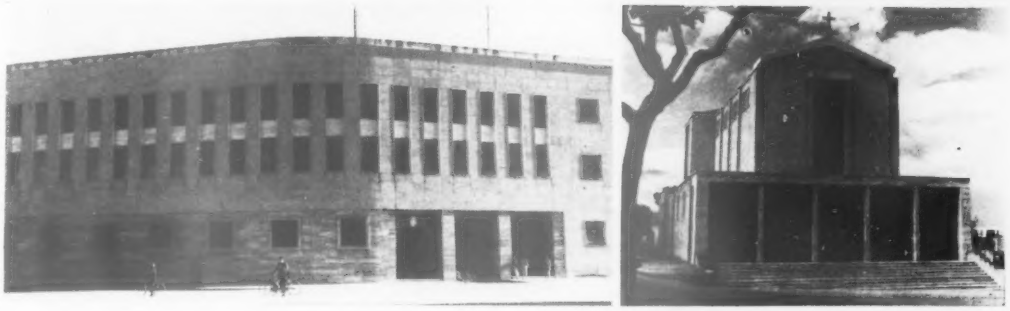

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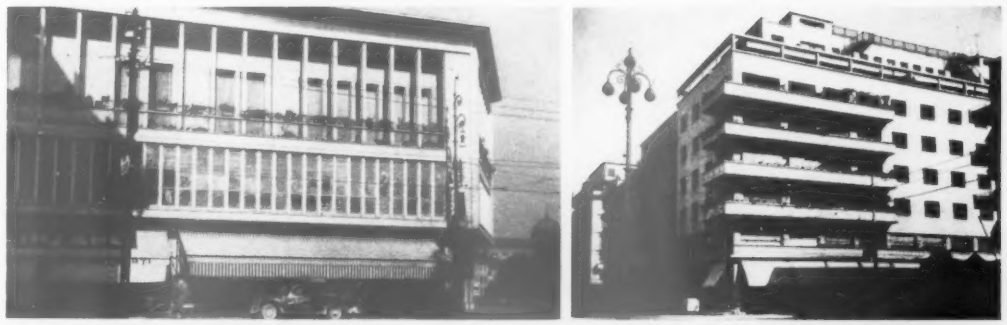

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In the more populated areas farther north the same kind of smoothed-over neo-classical alternates with a rough-and-ready modernism, the difference between the two being only a surface one: 12 and 13, at Padua; 14, at Pesaro (a municipal building); 15, a hospital at Popoli in the province of Pescara. Sometimes the two are cleverly amalgamated, and when this is done with skill and a sensitive eye for materials and

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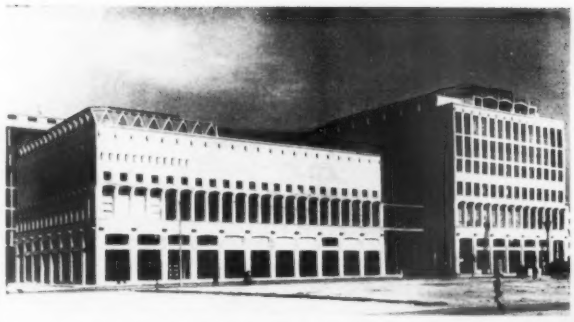
modelling we get a result as lively, if eccentric, as 16, the new public buildings in the centre of Leghorn.

Such an assertion of individuality more often results in a pointless whimsicality, as in this commercial and hotel building in Milan, 17. Milan generally, however, is a city of more sophisticated architecture, and more than any other city in Italy can claim that the great quantity of building that has gone forward since the war has been contemporary in spirit and much of it experimental in a more than voguish sense. Milan is the home, also, of a rather doctrinaire modernism: witness the city's first skyscraping office block, 18, the new areas of high-density housing, 19, and a self-consciously *avant-garde* chemical factory on the outskirts, 20.



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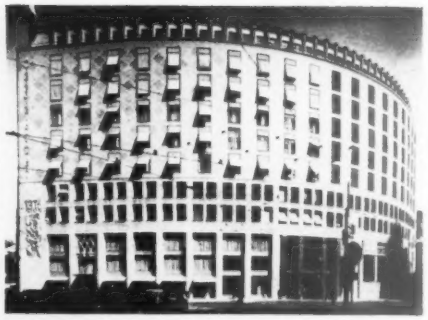

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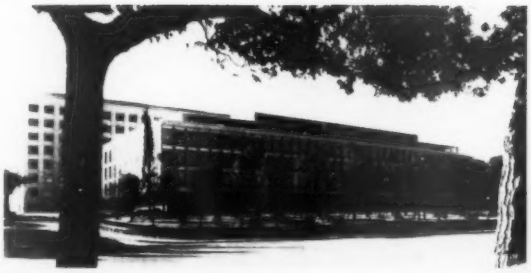
The rival to Milan as a centre of architectural activity is not unnaturally Rome. Here, too, are to be found a number of straightforward modern buildings, though a certain formality, reminiscent of the official style of the 1930s, is often an accompanying characteristic, as in 21, an office building in the Viale Eritrea. There is also plenty of building in the bald utilitarian style of the Ciampino airport at Lazio outside Rome, 22, and there are excursions into fantasy, like this domed church, 23, in one of the new housing neighbourhoods on the same side of the city. Most typical, perhaps, of the new Rome are the massive blocks of flats, 24, that have risen in great numbers about the hill-tops of the residential districts. Once more, cottage housing often shows a more sympathetic character, if only by references back to the vernacular tradition, as in the case of this estate at San Basilio, 25, in one of the new industrial suburbs.



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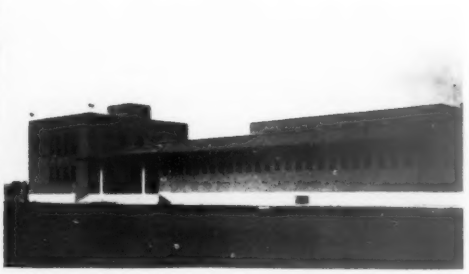

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Returning from Rome to the north we find in Genoa, 26, a new building in the Piazza Caricamento which, however clumsy, at least has the courage of its convictions and is not afraid to assert itself among its neighbours of earlier epochs. Finally, to symbolize the confusion of ideas that still reigns in Italy (though not to such a degree as elsewhere in Europe) here, 27, is the street leading up to the Ponte Vecchio at Florence—a street of shops in which the orthodox, the modernistic and the nondescript are inextricably mingled.

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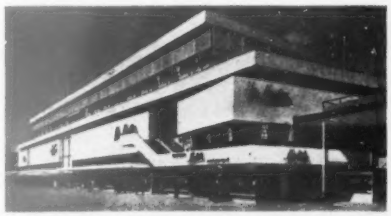
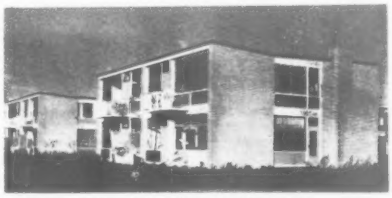
3. HOLLAND

It is not an exaggeration to say that in Holland the bulk of post-war architecture indicates not merely a failure to move forward from pre-war standards and values but a retreat to the values prevailing before the 1914-18 *war. In the* 1920's *and* 1930's *Holland was an* avant-garde *country towards which architects all over Europe looked for leadership. The Dutch were among the pioneers of the new architecture. They suffered immense destruction during the last war and have been energetic in rebuilding. In the course of rebuilding the better architects have not lacked opportunities, and in the replanned centre of Rotterdam, for example, there are some first-rate commercial buildings, A, which have both transformed and improved the pre-war character of that city. There is also a fair quantity of housing of excellent modern quality, B. But these are exceptions, which suggests that modern ideas may not have been so well established as the admirers of the pre-war achievements supposed. The nature of much of the post-war work, moreover, suggests a more positive influence at work as well. There seems to have arisen since the war a powerful reaction in favour of architecture with a regional character, employing traditional motifs. It may at first have been a response to nationalist feelings stimulated by the liberation, but it has continued, and is specially identified with the Delft school. The result is a plethora of gabled houses in traditional style and much somewhat arty brickwork. Quite large commercial structures are influenced by the same cosy ideals, which may also be responsible for the suburban appearance that is increasingly being given to the Dutch landscape. Where Dutch architecture does not positively look backwards it seems, with honourable exceptions, to have stagnated and become duller.*



A, department store in Rotterdam, by van den Broek and Bakema.



B, houses in Amsterdam by Alcert Warners.

It is to Rotterdam, the most heavily damaged city in western Europe, that everyone first looks for evidence of how the Dutch have met the challenge they faced ten years ago. They find not one answer but many. The commercial centre of the city presents once again a busy metropolitan scene, 1 (view from the portico of the surviving Exchange building), in a setting that is modern in general character but in detail combines a remarkable variety of architectural attitudes, most of them having a heaviness in common which prevents their variety of treatment from producing an agreeable picturesqueness. The same heaviness makes the vast Groothandelsgebouw, 2, too overpowering for comfort and the high flats, 3, an example of enlightened site planning, too monumental for their purpose.

Mixed with this somewhat heavy-handed modernity (and, it

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must be said on Rotterdam's behalf, a sprinkling of buildings of more distinguished quality) are more fanciful styles, of which this eye-hospital, 4, is typical, and a larger number that are fairly plain but strongly influenced by the work of the brick-gable school of Delft, 6. The sentimental outlook of the followers of this school, and their emphasis on national traditions, is even more in evidence outside the big cities—e.g. this group of buildings (also a hospital) at Maastricht, 5. The housing that springs from the same source is exemplified by this terrace of flats at Groningen, 7, though the detailing is not always so coarse and restless.

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Nationalism sometimes merges into romanticism; this example (church at Amstelveen, 8), more sensitive and distinguished than most of its kind, has affinities with the romantic architecture of pre-war Scandinavia. And sometimes nationalism leads to copying old traditions almost brick for brick, especially in small-scale domestic buildings: 9, housing at Zandvoort, the much-damaged North Sea resort; 10, old people's homes at Bergen. But naturally the urge to recapture the past is specially strong in places that were famous, before they were destroyed, for their antique character. 11 is a street in Middelburg, carefully rebuilt in imitation of its original style. Such a policy can be understood, if not approved of. It is less easy to understand the philosophy behind the new town hall at Middelburg, 12, which might have been designed in one of the most history-conscious decades of the nineteenth century.

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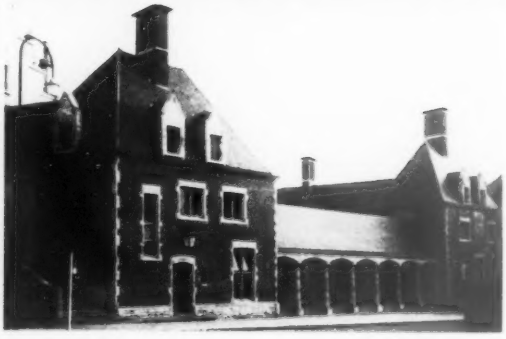

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Equally eclectic—and far more eccentric—is the new railway station not far away at Flushing, 13, which it is hard to believe was designed after the war, and for such a purpose. Flushing, indeed, offers a rare mixture of building styles, none of which could be dated with any certainty on the strength of its appearance: 14, traditional-style terrace housing;

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5, flats so characterless that they might be anywhere in the northern half of Europe; 16, a school of which the same can be said—also that its date might be anything after 1910.

Another area of widespread devastation, on the far side of Holland from Middelburg and Flushing, was that of the Rhine bridge-heads—Arnhem and Nijmegen. Here there is less eccentricity but equal timidity, except in the case of the Province House at Arnhem, one of the few new Dutch official buildings with character—a character, however, both odd and provincial. Generally, the thoroughness and earnestness of Dutch replanning policy goes hand in hand with an extraordinary absence of architectural conviction, exemplified in these two pictures from Arnhem—a block of flats, 17, of orthodox type with a few contemporary clichés superimposed, and a row of brick houses with shops beneath, 18, in familiar old Dutch style; likewise in these two from Nijmegen—a church, 19, that is typical of the more genteel productions of the school of Delft, and some cottage housing, 20, which might have been built anywhere in Holland at any time during the past thirty years, and, indeed, might equally be in an English suburb or new town.

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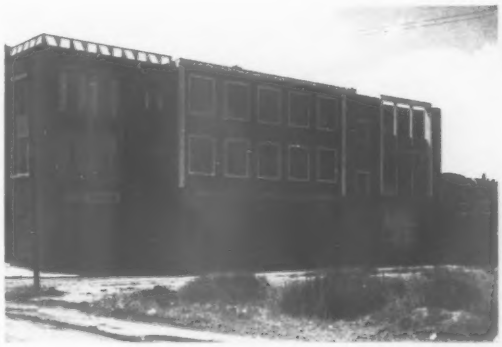

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Not all Dutch post-war housing is as uninspired as this. Here, 21, are some municipal flats at Utrecht, a good deal fresher and more positive in treatment. Yet the more hopeful impression created by such as these is soon dispelled by the far larger quantity of housing like 22, at Breda. And even in Amsterdam, whose progressive housing policy before the war set a lead for all Europe, a standardized dull orthodoxy, 23 and 24, seems now to be the rule. The Hague is somewhat more forward-looking, some of the newest municipal flats in that city being gay and enterprising, 25, with a breadth of treatment suited to the spacious planning of the new residential neighbourhoods. But even in The Hague the visitor is equally likely to come across examples like 26, flats which it is difficult to believe were put up only eight years ago.

Perhaps the example that summarizes most fairly the qualities and defects of Dutch housing is 27 (also at The Hague) where taste and traditionalism combine to produce a certain superficial charm, but the question must still be asked: is this a sufficient answer to the challenge of the modern world?

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3. HOLLAND

Finally, two important buildings in The Hague reflect the mixture of styles seen in new buildings of a more public kind: 28, the discreetly conservative Ministry of Education building; 29, the KLM offices, more vigorous in conception but exemplifying again the retrogressive influence associated with the school of Delft, which pervades Dutch architecture so strongly.

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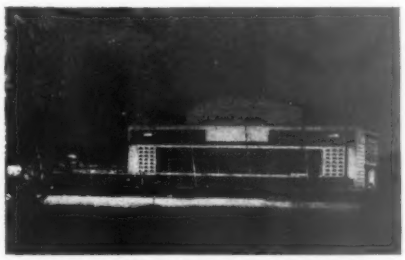
4. BRITAIN



A, Royal Festival Hall, London, by the L.C.C. architects.

If some of the Dutch post-war building seems to represent a return to before the war before last, most of Britain's has not yet emerged from it. The strange impression the traveller in Britain gets is that, instead of one architectural epoch succeeding another, several are occurring simultaneously. Architects or builders are designing as they designed in the 1920's *or even the* 1900's, *as though they were unaware what other architects were doing elsewhere. It is a familiar complaint that the British as a whole don't use their eyes, but one that becomes much more serious when it appears that those of the British who are responsible for visual standards—the architects and builders—have ceased to use them either. There is, of course, modern architecture in Britain, but it is a small proportion of the whole. There have been hopeful moments: when the most important new public building of our time, the Royal Festival Hall, A, was put in the hands of architects who could be counted upon to look forward instead of back, and when a young firm of architects with ideas about structure as well as style were made responsible for the first large-scale central rehousing scheme, B. But with honourable exceptions (the chief of which are the recent work of the LCC and school buildings, first in Herts and then in many other places), the only new phenomenon that has emerged since the war is a meanly finished utility commercial style of no distinction whatever, employed by development companies for the rebuilding of city sites often of such importance that in other countries it would be regarded as a matter of public pride that they were rebuilt worthily. In Britain nobody cares. These pages are concerned especially with the opportunities presented by wartime destruction, and it is saddening that it is in the blitzed cities that the failure of British architecture to show decision, enterprise or taste is most apparent. With the exception of Coventry and, to a less extent, Canterbury each is an object lesson in how not to rebuild, not only in architecture but in planning, the brave new reconstruction schemes that were produced at the end of the war having, almost without exception, been whittled away in the interest of expediency and* laisser faire. *Britain finished the war with internationally admired planning legislation, but the value of legislation depends on willingness to use it. How far Britain has still to progress is indicated by the quantity of badly designed speculative housing that has*

B, housing in Pimlico by Powell and Moya.

been springing up ever since financial controls were lifted. Planning controls were meant to stop such things; instead they multiply, and are threatening to nullify the very real improvement that was slowly taking place in local authority housing.

Canterbury, on the whole, has a better record than most of the badly bombed cities, so this typical picture of a rebuilt shopping-street, 1, with its inoffensive but somewhat genteelly modernized version of the familiar Georgian, represents the better work done in such places. There is plenty in the south-east region that is either worse or more old fashioned or both, such as 2, offices at Ramsgate, heavily mock-Georgian with an un-Georgian window pushed in where convenient; and 3, a factory at Folkestone in the crude modernistic style of the 1930's. There is also plenty of borough engineers' housing, like 4, also at Folkestone, as commonplace as such houses used to be before the general improvement in council housing that took place after the war.

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Moving north, to the much bombed city of Hull, we find a similar, and perhaps more dismal, picture: pretentious mock-Georgian in the centre, 5; crude quadrangles of flats, 6, and tastelessly dolled-up factories, 7. But that is commercial architecture. A university ought to know better, yet here is a new building for University College, Hull, 8, whose dreariness speaks for itself. Schools are often just as dreary, which is even less forgivable seeing the example that has been set by a number of good school architects in other parts of the country. This one, 9, is farther north on Tees-side; so is the typically uninspired council housing shown in 10; so, too, is 11, a house that it is astonishing to find dating from after the war—a grim reminder that the influence of modern ideas on the mass of British architecture is as yet negligible.

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4. BRITAIN

Travelling right across England to Plymouth, one of the most heavily bombed cities, the picture we get is little more encouraging. 12 shows the fine scope of Plymouth's opportunity, but the clumsy architecture on the left is typical of the rebuilt city centre that has come out of it. The housing in 13 is fairly typical and equally depressing.

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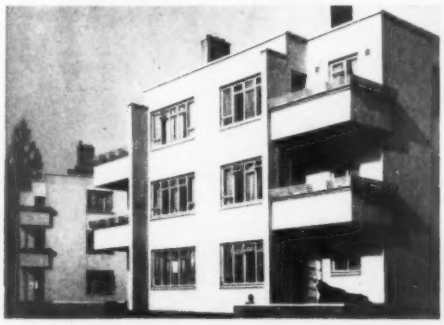
Along the coast from Plymouth is Southampton, where flats in similar style, 14, look a little more up to date only because they have discarded the pitched roof, and where this somewhat ambitious factory building, 15, is to be found. It is typical of any number of misguided attempts to dress up what could have been rational and elegant structures. Still farther along is Portsmouth, where the United Services Officers' Club, 16, has adorned its exterior with a mixture of mock-Georgian and modernistic detail, but where the wholly modernistic, 17, is perhaps even less to be welcomed.



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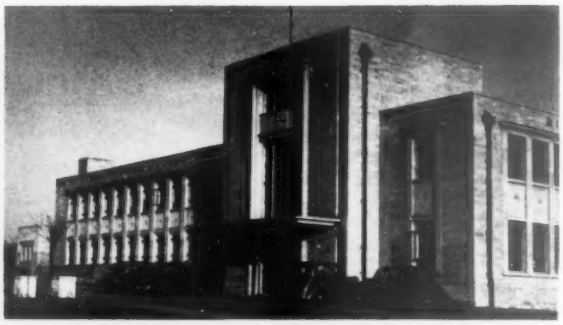

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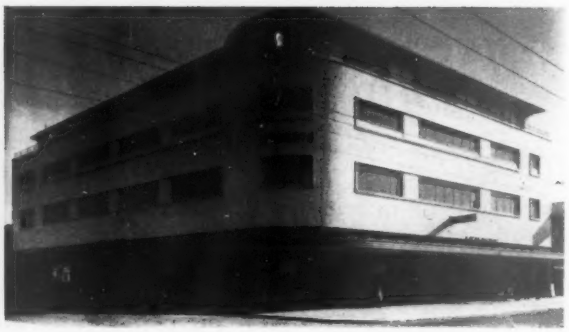

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After the banalities of these coastal cities it is a relief to travel inland to Coventry, to the one bombed city in Britain where plans made after the war have not been whittled away in the interest of expediency and where, as a result of the leadership of Donald Gibson, the city architect, a contemporary spirit now prevails in the rebuilt centre, 18. But even at Coventry the reasonably good modern buildings have gone up side by side with such conventional and characterless examples as the offices in 19.

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Leaving Coventry for other war damaged cities, conventional and characterless architecture becomes again the rule rather than the exception. At Norwich, 20, we find the usual watered-down Georgian superstructures rising above crudely modernistic shop-fronts, and at Exeter, 21, Georgian again predominates in shops dressed up in the mixture of styles we became most familiar with in the 1930's. At Bristol, the modernistic seems to predominate over the neo-Georgian, both in the commercial buildings that line that beautiful city's exceptionally ugly new shop-

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ing-streets, 22, and in many new industrial and other buildings. The shipping offices, 23, and the health centre, 24, exemplify styles of building to be found in their hundreds in every part of Britain. So, unfortunately, does 25, also in Bristol: commercial-modernistic in the shop on the left, which shows no advance except in matters of fashion from the one in the centre, which is a typical pre-war façade with a post-war shopfront.

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When at last we come to London we ought to find ourselves in a place which shows some understanding of, and sets a lead in the practice of, the principles of modern architecture. Yet most of the new office buildings which have been central London's biggest contribution to post-war rebuilding are of an abysmally low standard, whether regarded from the point of view of use of site, use of modern structural techniques or architectural conception and execution. 26 and 27 are typical examples (in Rosebery Avenue and Shepherd's Bush), and lest it be thought that their poverty-stricken design results from the fact that both happen to have been built only a few years after the war, here, 28, is one only just finished: in Piccadilly of all places. In any other capital than London those responsible would surely have insisted on a standard of design worthier of so important a situation. And lest it should be thought that the vestigial classical cornices adorning this building are all that now remains of the pre-war propensity for embellishing even the least suitable buildings with the full panoply of period-revival trappings, here, 29, are the huge offices for the Farmers' Union at Hyde Park Corner, also only just finished.

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New housing has gone up everywhere in London, a little of it good, some of it passable, most of it not. This sort of thing, 30 (post-war flats at Hammersmith) should be looked at again by anyone with a tendency to become complacent on account of the admirable achievements of the LCC. 31, flats in Park Lane, is an example of a more luxurious kind. Once more, what other capital city in the world would allow so trivial a building to be designed for a vacant site in one of its most prominent and distinguished streets —or, having allowed the design, would greet the result without a murmur of protest? Finally, one of the saddening phenomena of the last two or three years has been the return of the speculative house-builder, bringing with him all his pre-war stock-in-trade of arty porches,

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timbered gables, restless roof-lines and angular bay-windows, as though the good work recently done by many domestic architects, private and official, had never happened. 32 and 33, both from the outskirts of London, give some idea of what is happening, but only reveal a fraction of a vast and depressing whole.

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5. WEST GERMANY

By putting Germany last, we are able to end on a rather less dismal note. Architecturally it is a go-ahead country. There is much that is coarse and commonplace, but the intention at least is to build in the spirit of our time, beginning from the point reached when the Nazi revolution took place; there is relatively little of the pompous neo-classical style of the 1930's. There is also very little harking back to traditional practices or, as found in Britain and France especially, failure to perceive that traditional practices are technically and functionally out of date, not simply aesthetically outmoded. The battle in Germany is not, that is to say, a battle for modernity so much as a battle for quality and imagination. It is interesting that the heaviness which is the besetting sin of modern German architecture is often allied nevertheless with the thorough exploitation of modern building techniques; although in Britain we attribute heaviness to our failure to make use of modern techniques. Commercial buildings tend, in Germany, to be more lively than public or official buildings, but there are distinguished exceptions like the opera house at Munster, A. Industrial buildings, too, set a standard probably unrivalled in Europe, B. A phenomenon difficult to account for is that the technically enterprising and aesthetically uninhibited standard of design which creates so good an impression everywhere, does not seem to apply to domestic building, where a sentimental traditionalism predominates.

A. Munster opera house by Deilmann and others.

B. factory at Blumberg by Egon Eiermann.

Travelling through the war-devastated cities of West Germany one gets a dominating impression of a clean break with the past—everywhere from Hamburg to the upper Rhine and from Munich to the Ruhr. A high proportion of the buildings could truthfully be described as modern, even if a fair number are on the grim and forbidding side, like this monster housing scheme at Hamburg, 1. New buildings have transformed the very centre of cities like Stuttgart, 2, where the remnants of ancient monuments provide an

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agreeable foil to smart rectilinear façades. Here, as everywhere else, the more sensitively designed modern buildings alternate with the cruder forms of modernism, 3; on the outskirts of Stuttgart, 4, we are confronted with the phenomenon referred to above: the far more traditional character of most domestic building.

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In other cities the story is the same. In Frankfurt we find a preponderance of straightforward, if somewhat routine-bound, modern commercial buildings—5 and 6 are typical—varied occasionally by buildings in which the modernism preserves a flavour of neo-classical formality, 7.

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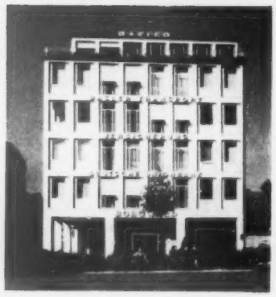

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In Munich, too, buildings with a positive modern character, 8, share the new sites with those displaying a conservative version of the same theme, 9. From Munich, too, comes this example, 10 (an electricity company's offices), of the survival, still occasionally met with, of the classical style favoured during the Nazi régime. For even in Germany the battle for modern architecture is not completely won. There are examples of the regional romantic such as 11, and even of the full-blooded period-revival, 12. Both these are in Munster and make a strange contrast to the imaginatively conceived opera house referred to and illustrated on the facing page.

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But when we get back to the big city centres inhibitions seem to fall away again. 13 and 14 are typical of the high standard of design to be seen now in the commercial quarters of Cologne, though in Cologne, too, there is a quantity of contemporary for-

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malism, 15, an occasional example of eclecticism that harks back to well before the war, 16, and an opera house, 17, that is aggressively modern but in the somewhat blundering Germanic style that turns modern architecture into a display of the gymnastics of which modern construction is capable. In Cologne, too, is this church, 18, in the home-spun style that shows, albeit clumsily, the continuing influence of the arts-and-crafts movement.

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Hanover has, perhaps, the highest average standard of all: the real distinction of 19 and 20 is by no means exceptional and there is a relatively small amount of building as commonplace as 21. Even 22, in spite of a certain crudity, suggests a firm intention that the new Hanover should be not only contemporary but coherent. Only in some of the new housing at Hanover, 23, are we reminded of the west German propensity for a cosier, more sentimental, approach when it comes to domestic architecture. There are also, as there are all over Germany, examples of this style, 24, a typical production of many official architects' offices, which remains basically traditional while presenting a smoothly modernized face. This is a school.

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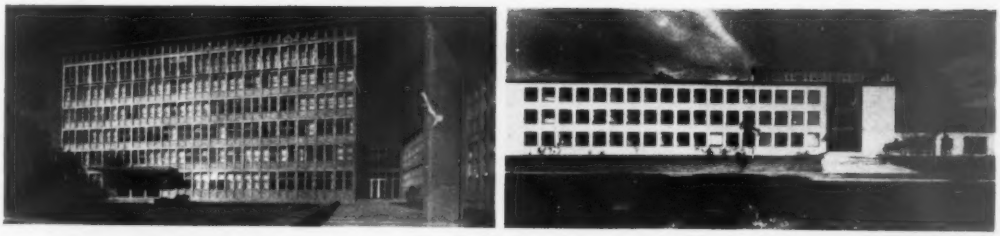

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25 is another type of school, at Wurzburg, in which the traditionalism is more pronounced, with a more romantic regional flavour. Neither of these schools suggests an urge to meet the challenge of new ideas, nor does the cautious conservatism of this Government housing at Bonn, 26. And there are many examples of the kinds of monumentally inelegant industrial work such as Germany produced in great quantities before the war—witness the vast new Opel factory at Russelsheim, 27. But, typical as these are in many ways, none of them suggest the boldness and vitality that are the dominating characteristic of post-war German architecture as a whole. This is best shown by the quantity of passable modern building that goes up almost unnoticed in every West German town. These three examples (from Oldenburg, 28, Essen, 29, and Kiel, 30) have been chosen almost at random from a hundred times as many.

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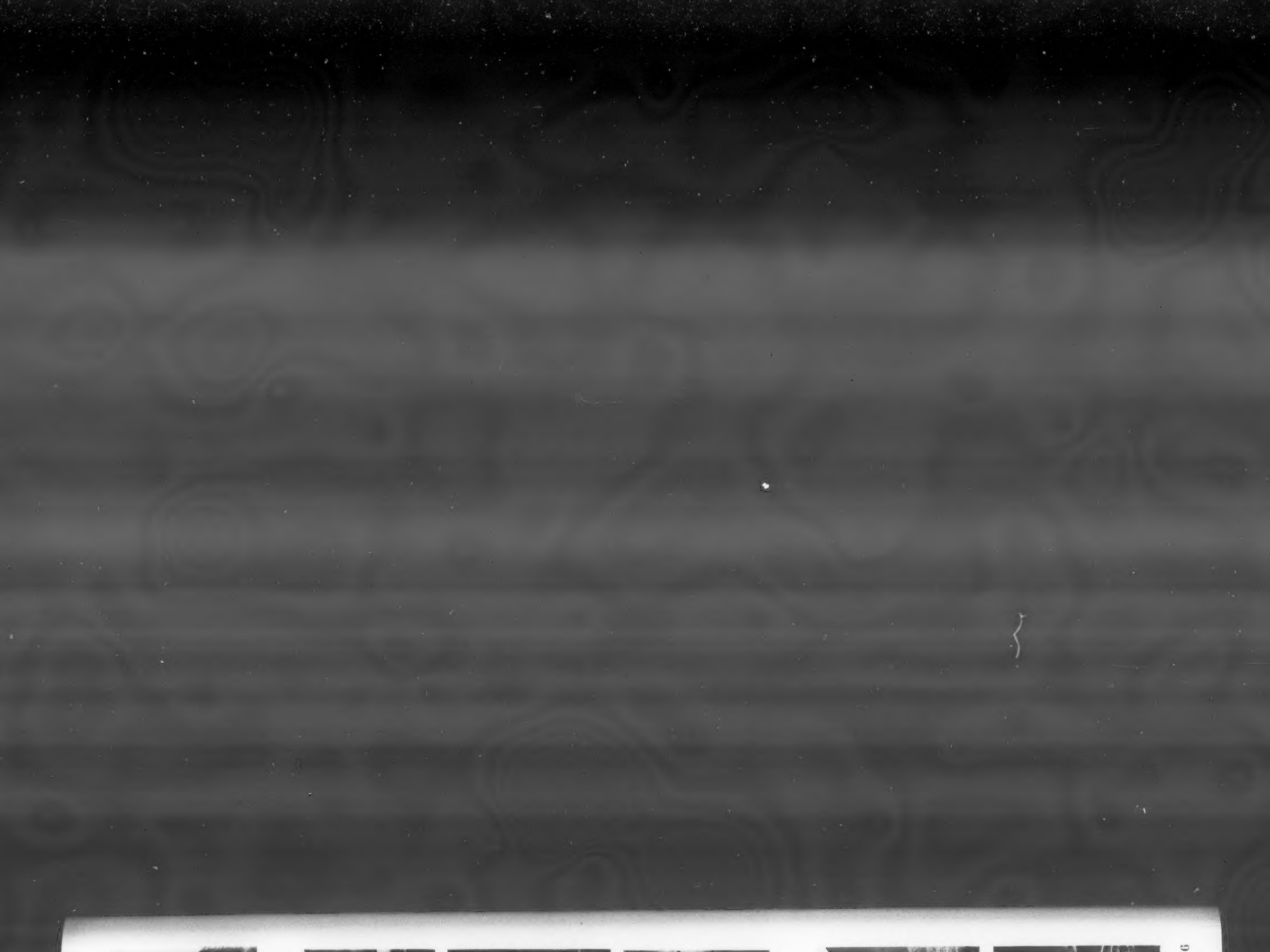


Robert Melville

GILES

Carl Giles is probably the most popular English comic artist of our time, and is certainly one of the few distinguished draughtsmen to be found in the massed ranks of 'funny men' working for the big-circulation newspapers. The circulation of *The Daily Express* and *The Sunday Express*, which ensures for his work a day-to-day audience of several million men, women and children, does not in itself signify great popularity, but the fact that the album devoted year by year to a selection from his *Express* cartoons is printed in a limited edition of half a million copies and is unobtainable a few weeks after publication provides massive evidence of his general appeal.

Broadly based popularity of the kind enjoyed by Giles imposes its own peculiar responsibilities and restrictions, and although vast areas of human behaviour and experience are strictly excluded from his terms of reference, the secret of his pre-eminence as a newspaper comic is to be found, I think, in the superbly effective way in which his graphic exuberance creates the illusion of an almost reckless freedom of comment.

He could not be called a scintillating wit, and even his sense of humour is not very highly developed. He is content for the most part to exploit the unsophisticated, knockabout humour of *Comic Cuts*, and to extend its range by taking a slapstick view of contemporary topics and events. The stable element in his work is its gleeful exaggeration; it by-passes the weak captions, hackneyed jokes and stock characters that frequently but not at all disastrously take the sharpness out of the ostensible point of his cartoons, and leads a life of its own.

Even when the joke in the caption is a good one, the drawing does not confine itself to illustrating the point, and a cartoon about the recent gangster trials provides an excellent example of the way his sense of fun 'exceeds necessity.' Two judges are standing in the central hall of the law courts, and one says to the other, 'Nicked my kisser with my slasher whilst shaving this morning.' The drawing of the two judges very pleasantly and adequately illustrates the caption, but these figures occupy only 2½ inches of a cartoon which spreads across the entire width of a page of *The Sunday Express*, and the rest of the space is occupied by irrelevant 'business.' Without making a catalogue of these comic goings on, mention may be made of the barrister who is studying a Soho-English dictionary, a gangster witness who has playfully flicked his jack-knife at another barrister

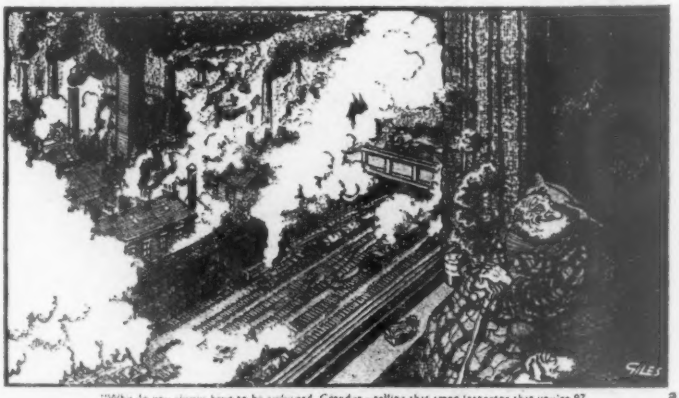
and pinned his gown to the floor, a second disreputable witness who has tied a strop to the sword of the statue of Justice and is freshening up his razor, and posters on the walls of building on the other side of the street which advertise sticking-plaster, and detergents suitable for removing blood-stains from shirts, or bear such captions as 'Read Jack Spot's life story by Billy Hill.' Even under the gothic lettering of 'Court 3' there is a tiny notice that can be read if one's eye-sight is good enough: 'Ye passing of betting slips is forbidden,' it says. So although the point of the cartoon is made instantaneously, a considerable time can be spent upon an examination of the by-play. But this is an example of Giles at his best, and the value of the by-play is even more apparent when the joke is weak. For instance, as a comment on the visit of Russian statesmen, the remark of the village wiseacre who is one of Giles's stock characters —'Malik, Malenkov, Serov, Krushchev, Bulganin—if them Russians was to declare war today there'd be half of 'em over here already'—doesn't strike me as being very funny, but Giles proceeds to dot the i's and cross the t's of this Russian 'invasion' in a most absurd fashion. Two yokels greet each other with the clenched fist, a Russian air-liner flashes past the Norman tower of the village church, a child with hair standing on end has just taken a sip from his father's bottle of vodka, an itinerant musician plays 'I wore a red, red rose' on a tin whistle, and so on and so forth. The by-play is scarcely funnier than the caption, but there is something peculiarly endearing about the trouble he takes with these little goings-on in order to keep one's attention, and by the time one has winkled out every absurd and minute detail one is not exactly in a position to sit in judgment. One may not have been amused, but one has certainly been entertained.

Lord Beaverbrook has called Giles's humour 'sardonic,' but there is nothing of the social reformer or axe-grinder in Giles to give his humour a provoking or angry edge, and there is little sign of bitterness or mockery in his work. On the rare occasions when he tries his hand at being scornful he is careful to blaze away at some outrage which is always with us and for which no one ever has any feeling of personal responsibility, as in his cartoon against litter-bugs, where he depicts a couple of pigs in a neat enclosure looking out at a landscape strewn with refuse, and one pig is remarking to the other: 'Yet it's us they tag "dirty"!' In such attempts at social criticism his gleeful exaggeration becomes incongruous, and in this particular instance his smirking pigs undermine what may well have been genuine indignation, and remind one rather too effectively of the communo-fascist pigs in Orwell's 'Animal Farm.'

The American servicemen's paper, *Stars and Stripes*, pays Giles the compliment of calling him 'Britain's best cartoonist since World War II,' but when it declares that he has created 'more subtle humour at the expense of American servicemen than any other cartoonist who was not born, bred and drafted in the USA,' it surely means not 'subtle' but 'rollicking' or 'uproarious.' Some of his cartoons of American servicemen in England are very funny indeed, but I would have said that subtlety is a quality that he takes some trouble to avoid.

He is obviously appreciative of other and more sophisticated kinds of humour, and sometimes refers to them in his own clear-cut, simplified, de-sophisticated way. The young woman named Vera who appears in many of his family cartoons—she wears glasses, and feels that 'somebody or something' has taken the poetry out of her life—is not so much a character from life as a broad, kindly skit on the subjective ambiguities of the humour that arises from the study of Freudian man. From time to time he also acknowledges the more sadistic aspects of contemporary humour in some of the cartoons devoted to the escapades of his gangs of goblin-like children, but without ever disclosing a streak of morbidity.

Someone—I don't know who, but he is quoted by Mrs. Giles, the artist's wife, in her introduction to one of his albums—has pertinently remarked that Giles



"Why do you always have to be awkward, Grandpa—telling that smog inspector that you're 97, lived here all your life and love it?" a

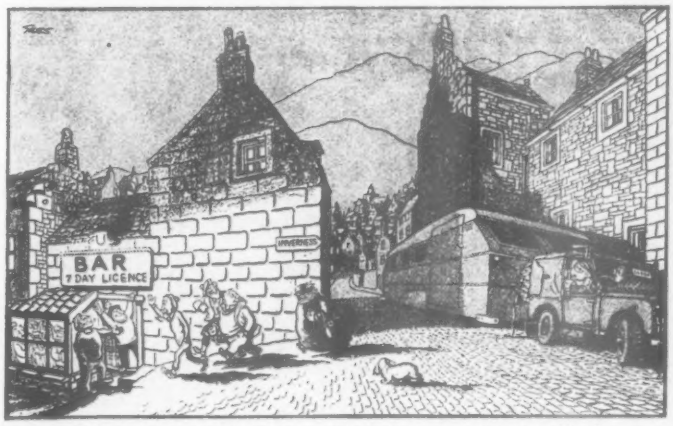
'draws real buildings, real pubs, real railway stations,' and I was sharply reminded of the fact by one of his less amusing cartoons, on smoke-abatement, which nevertheless provided an excuse for a splendidly dramatic aerial view of trains and factories, a.

This brings us to an aspect of the fascination of his cartoons which seems to owe nothing to his sense of

the comic, although it is arguable that the authenticity of his settings sharpens the impertinence of the comic by-play: the lovingly observed 'monastic gothic' of the law courts in the 'Nicked my kisser with a slasher' cartoon may be considered a case in point.

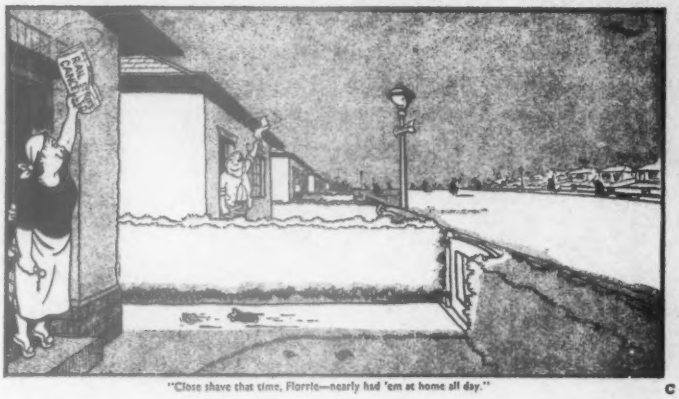
It is odd that he never caricatures a building. A good many of his architectural settings appear to derive from the area of Suffolk around Ipswich in which he has made his home, and the old houses and steep streets that provide some of his happiest backgrounds would lend themselves to a treatment as quaveringly comic as his village wiseacre or Emmet's vintage locomotives, but he evidently feels no temptation to tamper with them. He has the same serious attitude towards machines of all kinds, and it is as if he were intent on telling us, affably and unpretentiously, that man is less noble than his works.

Be that as it may, he has a flair for seizing the spirit of a neighbourhood. He can re-create equally well the wind-swept, rain-washed look of a small Scottish town, b, or the bleak neatness of a housing estate, c,



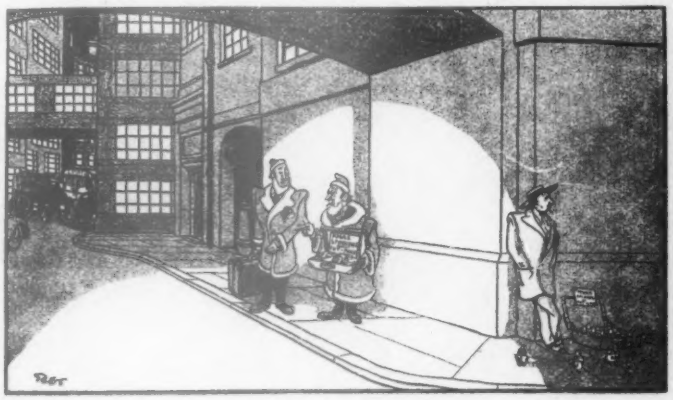
b "What have we stopped to celebrate this time—the Battle of Bannockburn or Battle of Britain Week?"

and has a particularly sharp eye for the juxtapositions that arise from piecemeal change, whether it



"Close shave that time, Florrie—nearly had 'em at home all day." c

be a matter of suburban gardens, or the glass and concrete invasion of Dickensian London, d. In fact, his cartoons seem to have incorporated the functions of topographical draughtsmanship, and if one compares his settings with the last polite remnants of the

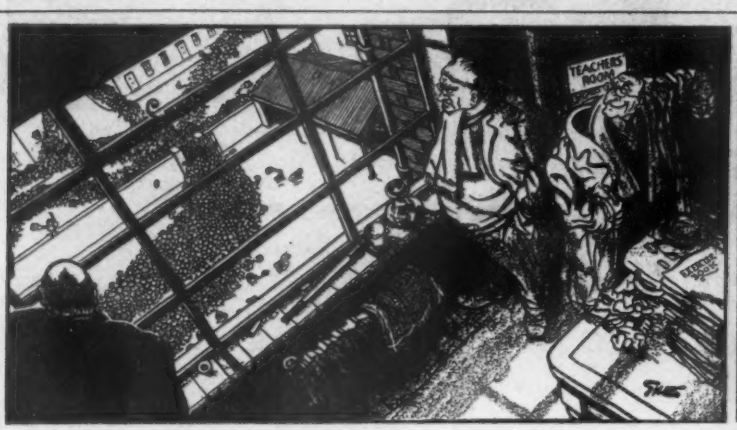


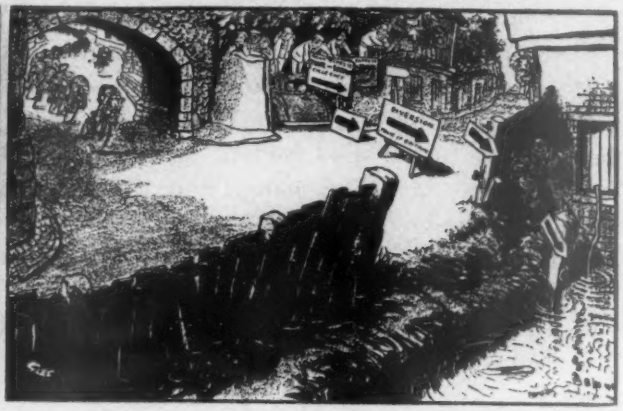
"Nice piece of suiting, Sidney—very nice." d

topographical tradition still sometimes to be seen in the nicer Sunday papers when a famous building or precinct is about to be demolished, one cannot but acclaim his gift for capturing the ineffable overtones of lived-in places in bold and inimitably simple generalizations.

Giles as observer of architecture, townscape and space is completely at one with Giles the creator of humour. His roving, anti-classical eye scans the wide scene, recording details that are comic, true, significant, typical, and drawing the viewer's eye deep into the multifocal worlds-within-worlds of his pictorial imagination. This serial vision of objects in space is popular and sophisticated, in the best senses of both words, and picturesque, in the best original sense

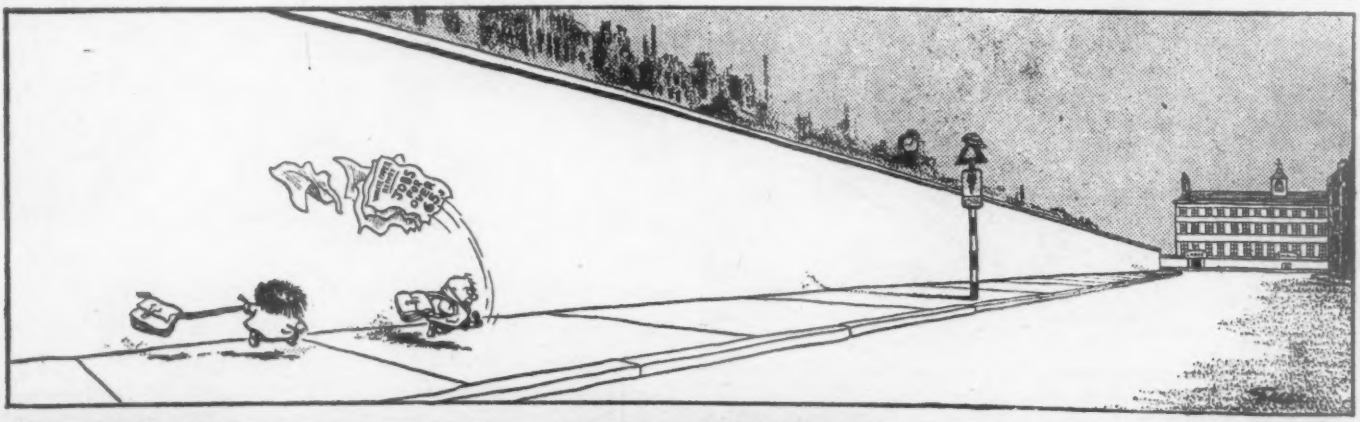
of that much-abused word; it is a vision that is well suited to the appreciation of townscape, to the enjoyment of Arcadia, and the recording of the horrors of Subtopia.





1, 2

giles with the roving eye In so far as the broad public, for whom Giles's humour is intended, are aware of sources or influences, the only one they are likely to notice is the cinema—the over-wide format, the occasional nose-dive perspective from a high window, 1, the use of a roving, scanning eye. But the chances are that Giles and Hollywood have this turn of eye independently from a common source, the general tradition of anti-classical landscape painting that threads back through the popular post-card picturesque, Romantic painting and the Picturesque proper, to Mannerist Landscape of the Dutch and Italian schools. His use of a steep drop from a forescene straight to a distance without middle ground (see 10 and 13, below) shows him tapping this tradition somewhere near Turner; his many worlds in one, and his use of narrow visual exits near the edge of the picture-space, to lure the eye away from a busy foreground, 2, takes us back at least to Saenredam and the problems discussed by Roger Hinks in *Peepshow and Roving Eye* (AR, September, 1955.) (1: '*Of course, boys and girls of intelligence learn infinitely more by rubbing shoulders with their playmates than they can possibly absorb in the classroom.*' 2: '*Several motorists . . . used the Daily Express Tour of Britain as an opportunity to strike at their enemy, the cyclists.*' *Giles points out* '*I am a cyclist—that's me cutting the corner on a trade bicycle.*')



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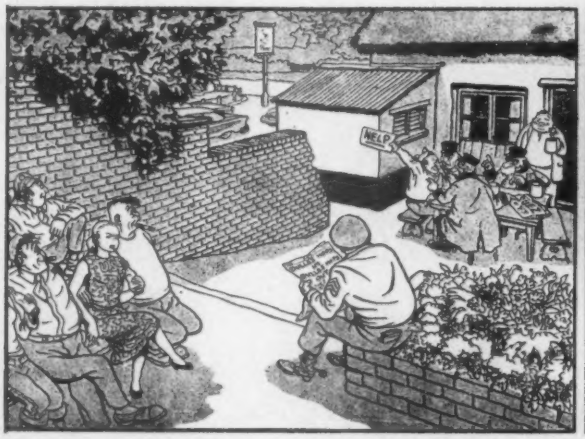
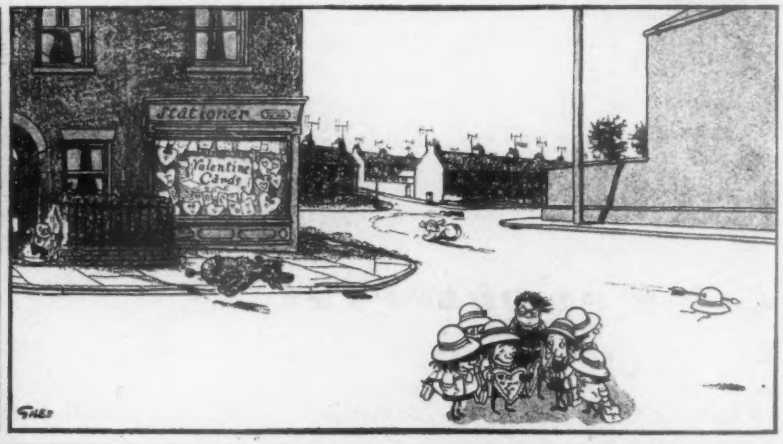


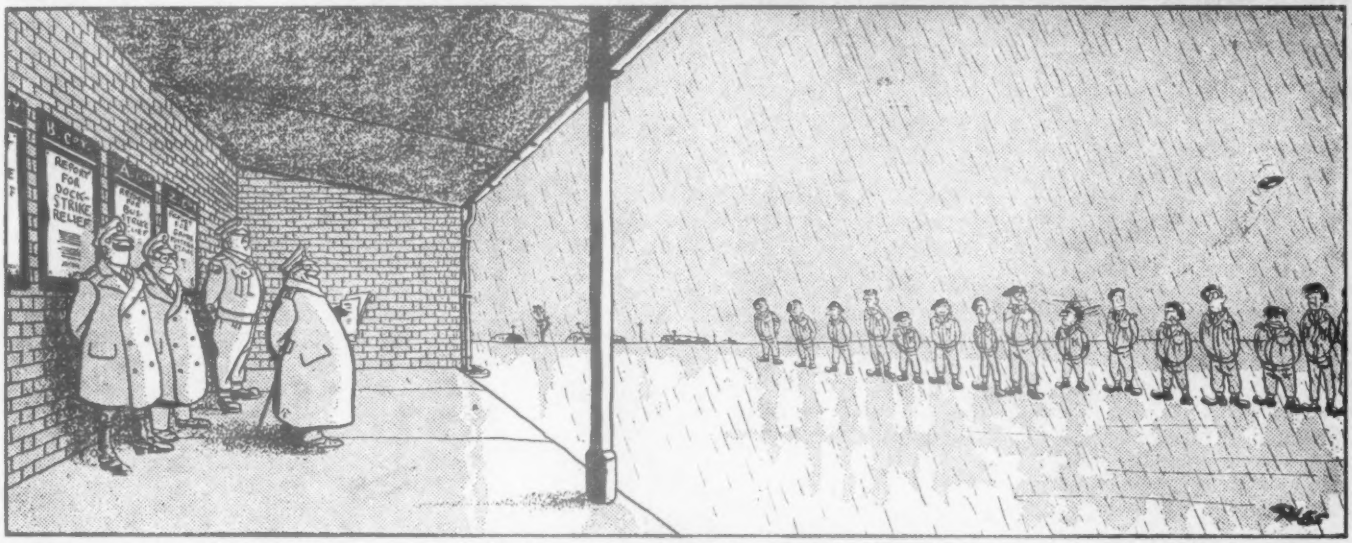


4, 5

giles as space-maker Giles's world has no backgrounds—only in an occasional interior is there an enclosed picture box—it has back-spaces instead. Into these spaces the eye is either bullied by the obvious perspective compulsion of a long fence or wall tapering from the edge of the picture towards a vanishing point it often almost reaches, 3, or more subtly cajoled and seduced to follow a devious route, often three-dimensional in character, 4, in which vital links may be no more than suggested, as at the point where the path, turning across the back of the outhouse, is temporarily hidden by the broken end of the wall. It is to be noted that this type of space in Giles is friendly and humane, whereas

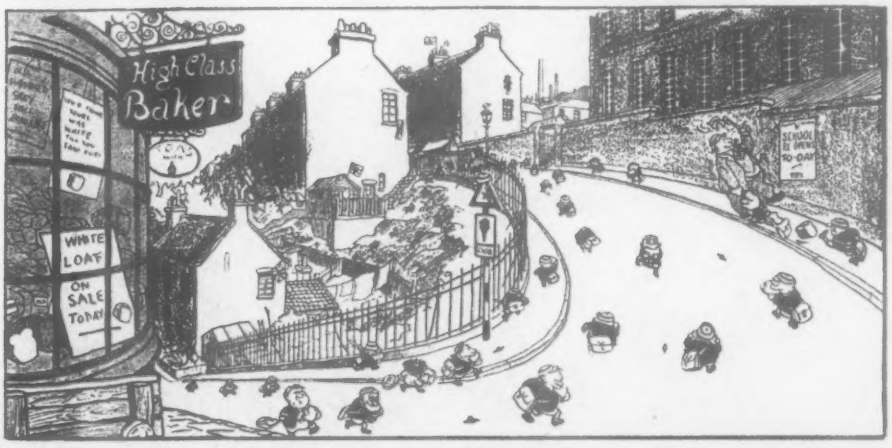
that of the long wall is rarely so, while the use of pure space, abstract space, is with him always hostile, and isolates man from environment, seeker from object, promise from performance, 5, rather than a mere rehearsal of themes from Dali. (3: '*By the time we're a 'undred some bright client 'll decide we're not too old to go back to school.*' 4 [detail]: '*Help.*' 5: '*Cupid is a knavish lad—Thus to make poor females mad.*' [*Shakespeare*].)

6,7



8

giles as architectural recorder Giles is less an architectural draughtsman than the passing recorder of architectural fact. Sometimes this is no more than the accurate recording of a particular building, for the sake of a sort of souvenir-card authentification of place, but more often it deals with what might be called the Constituent Facts of architecture, such as the nature of a certain kind of inn-yard in the country, identified accurately by the scarff-joint in the barge-board of the stable roof, and a fold of wall that must be the entrance to the urinal, 6. Or it may be another class, of constituent facts, such as the giant scale, the expressionist drama of the backsides of current building types like football stadia, 7. Or beyond this again, his ability to seize and express what might be termed the One Ultimate Fact About All Architecture, the difference between belonging inside, in shelter, and being left outside in the unfriendly elements and the endless undifferentiated, hostile space, 8—another aspect of abstract space isolating man from his most basic needs—which appears here in the most chilling aspect that Giles has ever given it. (6: [detail]: '*Boy Tom and Boy Dick be discussing Berlin Peace Conference.*' 7: '*Isn't he supposed to be at the Lord Mayor's banquet?*' 8: '*Now with reference to this railway strike—I suppose all of us at some time or other have wanted to be an engine driver. . . .*')



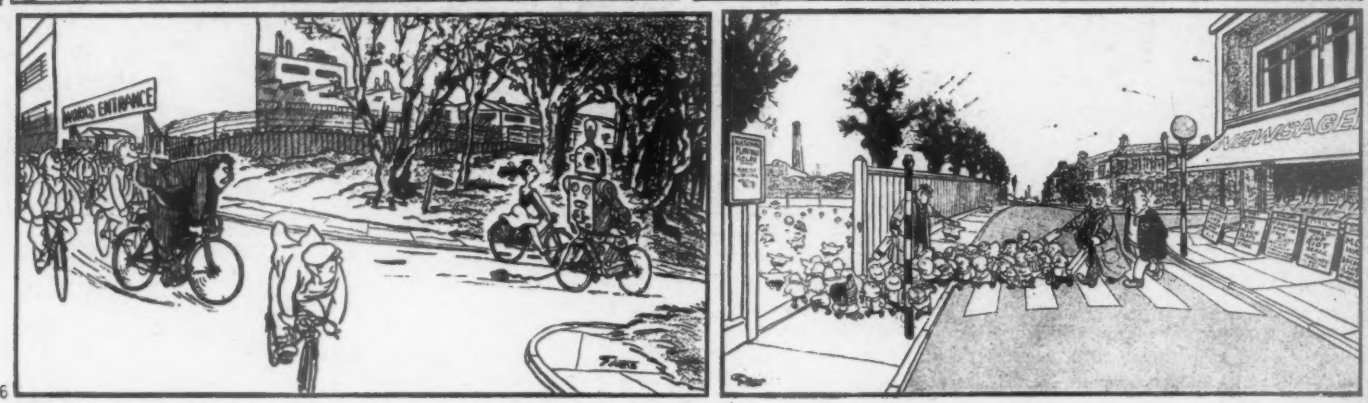
9

giles in the townscape The humane quality of Giles's richly devious routes through deep space has already been noted; it reveals the mind of a natural Townscaper. Almost inevitably, Gilestown is an aggressively split-level place, with roads angling around impossible corners that make drama out of the dullest buildings, 9. It is stuffed with the ornaments and impedimenta of the streets and pavement, full of surprise and incongruity—not only of the close-up kind, but also of the remote and irrelevantly poetical kind, as where a distant dome serenely focuses the deep space of a close and squalid foreground, 10. On the other hand, he is fully conscious of the effect of an enforcedly close horizon, over which the eye is lured without any certainty as to what lies beyond, 11—except the

10, 11, 12

certainty of surprise and revelation. The Good Places in Gilestown show his understanding of the raw material of townscape epitomized in 12, with its changes of level, its rich floorscape of cobbles, steps, gutters, trap-doors, its public spaces on a human scale; its well-framed views of interior and exterior spaces, its intimations of a pedestrian network, and its lively immediacy in presentation of man to environment. (10: '*Cargo of crime comics from the States in Dock A. . . . Can we break strike and unload, please?*' 12: '*Watch your step, fellows —the natives seem restless tonight.*')

13, 14



15, 16

giles in subtopia The Townscape Eye gives Giles the necessary qualifications to chronicle with accuracy—if a cynical accuracy—the descent of the arcadian ideal into Subtopia. His Arcadia is drawn from its true suburban prototypes on the southern and far-western fringes of London. Steep paths drop from hillside churches and embankment-side stations to areas of boskage, arty thatching and crafty barge-boarding, 13. Ruskinian detailing and hardy exotic plants abound; the wrought-iron gates are still in position, the stone balls are still on top of the gateposts. The degrees of degradation from here to squalor are noted with care—even the precise point along the road where lush Arcadia ends, and cut-price Subtopia begins, 14, or the equally precise point where the bits of Arcadia or open country that are left become Subtopia simply by being left, 15. And, finally, there is ultimate and consistent Subtopia, with its grim perspectives, its murdered trees, its beheaded road-signs, its littered 'open spaces' overshadowed by the messy backsides of industry, 16. The man who knows his Giles—and that means a very large slice of the community—knows already what is right and what is wrong with the face of England, possesses already an educated eye. The problem is to persuade him to see these rights and wrongs as the product of human decisions and abdications, and then to act on what he sees. (13: '*You'll get nothing up there that I ain't got in my shop, Bert 'Iggins.*' 14: '*My dad says they ought to send you out to the Bahamas on these germ-warfare tests, Mr. Smiff.*' 15 [detail]: '*Doing me out of overtime's one thing—riding home with me Popsy's another.*' 16: '*Lot of good us trying to teach children that sport's the thing.*')

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82

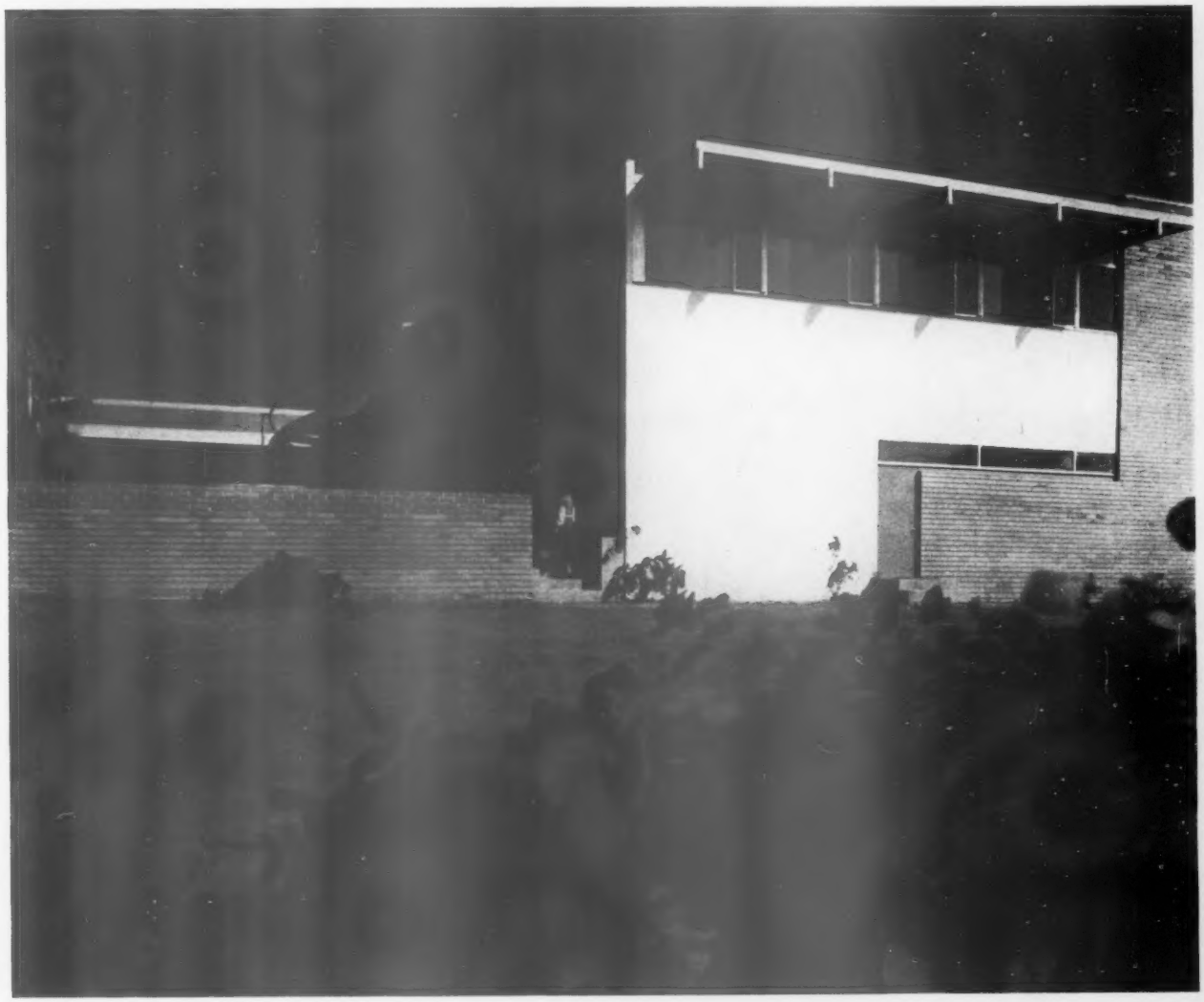
GEMOLOGICAL INSTITUTE IN CALIFORNIA

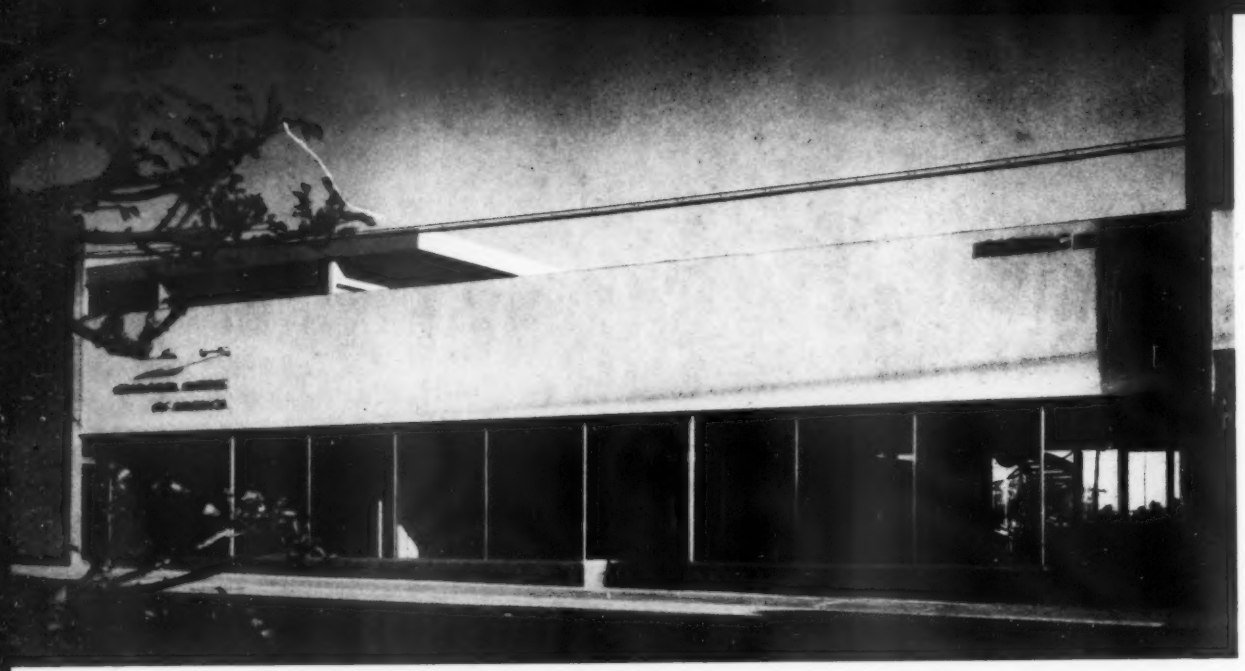
ARCHITECT | **RICHARD J. NEUTRA**

This is a non-profit-making educational and research centre for American and Canadian jewellers, providing training—both on the spot and by correspondence courses—in identification and valuation of gems and also a gem-testing laboratory service. The site, at Brentwood, is about forty miles east of San Francisco near the Sacramento river: it is on the south side of San Vicente boulevard—the frontage provides rental space for two 24 ft. by 48 ft. shops. The general office and storage rooms are on the ground floor, and the laboratories, classrooms and administrative offices are on the first floor; the classrooms can be thrown together to form a lecture hall. A

[*continued on page* **185**

1, rear elevation and parking; the patio is behind the brick wall on left.

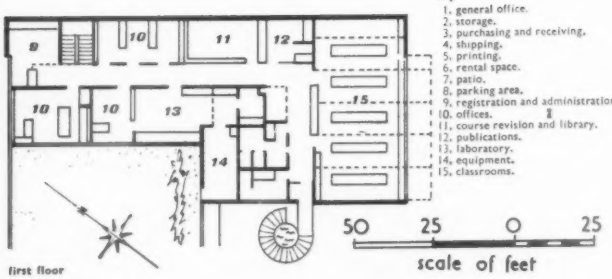




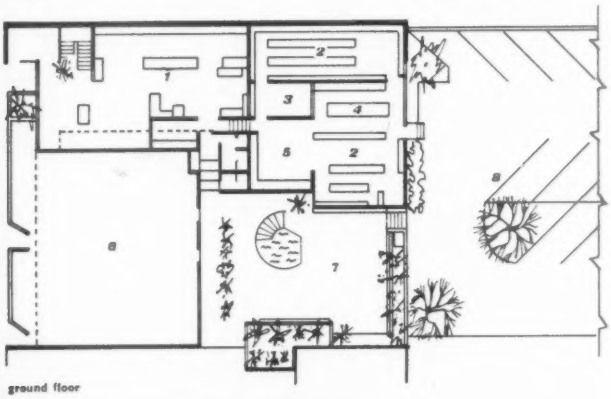
2

3

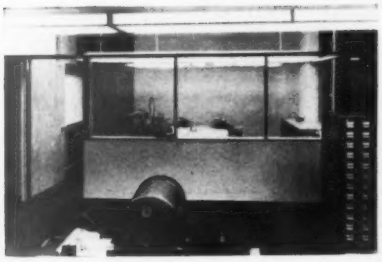
key
1. general office.
2. storage.
3. purchasing and receiving.
4. shipping.
5. printing.
6. rental space.
7. patio.
8. parking area.
9. registration and administration.
10. offices.
11. course revision and library.
12. publications.
13. laboratory.
14. equipment.
15. classrooms.



first floor



ground floor



4

5

GEMOLOGICAL INSTITUTE IN CALIFORNIA

continued from page 183]

pebble-faced concrete patio faces the rear entry parking lot and will connect with the patio in the adjoining office building ; from it a self-supporting spiral staircase forms the main entrance for visitors: it turns 270° and is reflected in a small pool in the patio itself. The building is steel framed with wood stud bearing walls ; the foundations include 40-ft. r.c. columns, as the site consisted of loosely filled earth. The entrance has a concrete floor with a visible aggregate of semi-precious stones ; this treatment was also used on the heads of the spiral staircase, which is made up of steel box sections tied together with open pans of steel into which the concrete treads were poured.

The collaborators on the design were Benno Fischer, Serge Koschin, John Blanton, Perry Neuschatz and Gunnar Serneblad.

2. Street frontage ; institute entrance on left, shop rental space centre and right.
3. Spiral staircase inside patio, winding up over a pool to form main entrance from the car park.
4. One of the instructors' offices on the first floor.
5. Looking from the general offices to the shipping department at the back of the building.
6. Patio and staircase from the west.

6

frustration ↑ ← | ↓

ideal road

danger

Occasionally experienced, the ideal "road" like this dyke over the IJsselmeer is the motorist's dream. Sixty miles in sixty minutes or less. The taut, balanced machine we sit in can do it easily. What we get, in fact, is frustration: a crocodile of ill-assorted vehicles negotiating bends and undulations at 20 m.p.h. This results in frayed nerves for the majority and actual danger in impetuous risk-taking. The easy answer is to rebuild the road system but this may take 50 years. Cannot something be done now? Read *on*.

Gordon Cullen
and
Michael Regan

SWITCH ON

A PLEA FOR A ROAD POLICY THAT SUBSTITUTES FOR PIPE-DREAMS OF CLOVER-LEAVES AND AUTOBAHNEN PRACTICAL MODIFICATIONS THAT CAN BE REALIZED NOW ON EXISTING ROADS TO MAKE MOTORING SAFER AND LESS FRUSTRATING.

THE IDEAL ROAD SYSTEM

What is the predominant mental experience of the motorist as he journeys on the roads of Britain today? The answer is irritation. Irritation and frustration. And after irritation comes the dream, the dream of what could be. Once you open these magic casements a whole new world lies before you. You savour the tang of that unfolded, wide ribbon of road sweeping imperiously to the horizon. In that mood you start to plan your ideal road system; the frustrations of cross roads and traffic lights are smoothed away in clover-leaf crossings, contours are laughed at as the vital ribbon stretches serenely and indifferently over the slender, sinewy viaduct and cuts through the whale-backed hills. You sweep past towns on by-passes, you cruise at 100 m.p.h. down autobahnen and autostrade. There is one snag to the thing and only one—it is a dream. We shall be dead before these roads are built.

ECONOMIC REALITY

In the last ten years the number of vehicles registered has more than doubled (from less than three million in 1946 to more than six million in 1955). It is predicted that in the next 25 years the number will be doubled yet again. The Ministry of Transport has already instructed all highway authorities to base their plans for road works on the assumption that future traffic will be some 75 per cent. above that of 1954. But we know that even if, in the near future, we could afford to build one or two ideal highways we can't seriously expect to discard the network of roads that represents 90 per cent. of mileage in the country.

FRUSTRATION, THE CURSE OF DRIVING

The first sensible thought is that the curse of driving is not inability to do 100 m.p.h. but frustration. How does this frustration arise? Most drivers would agree that however tortuous the road the driver is at peace with himself *providing* he can use the road at his own speed. The source of irritations and frustration is not the existing road system as such; it is the traffic on it. Cars are becoming faster and more powerful each year but cruising speeds are dictated by hold-ups far more than by the cars' capabilities, and the very fact that a driver has to drive at a speed far below that of which his car is capable is psychologically a factor making for accidents. The only thing which to some extent saves the situation is that British drivers are the best mannered in the world, the most careful and probably the most all-round efficient. We speak of accident figures as if they were the result of a criminal class of drivers, but if drivers were not on the whole almost miraculously clever and careful these figures could be quadrupled.

The vast majority of road accidents are the consequence of driver's neurosis built

DRIVER'S NEUROSIS

up during years of driving by a sense of frustration. It is particularly evident on crowded roads and in the urban street. Overtaking on bends and brows of hills, shooting traffic lights and the general urge to hurry—all these are the consequence of endless hold-ups. Even the urge to overtake your enemy in the next car and not to let him overtake you is enormously increased by a lifetime of stopping and starting and being outwitted by others suffering from the same psychological disease. Frustration leads drivers to drive dangerously out of pique, lateness, exasperation, nerves or exhaustion.

Of course the road system with its lack of laybyes, its undulations, corners and crossings is the cause, the infuriating cause of hold-ups, but there is a distinction to be made and it is a vital distinction. Since we have to assume that a short-term solution to the road problem involves retaining the road system much as it is, then the one essential is to remove driver frustration—in other words we must decide that natural hazards do not, in themselves, cause frustration; this is caused by other road users.

The problem now reads: if the ability to travel at your own speed results in the removal of driving frustration how can this freedom be achieved?

SEEING ROUND

The most important requirement in navigating a car is visibility. The *extent* of the need for forward vision is greater than common sense would believe. Where cars move at fifty, so that approaching lines of traffic have a closing speed of a hundred, the safe sight-distance for overtaking, for a car initially travelling at the speed of the vehicle baulking it, is reckoned to be one-third of a mile.* In order to overtake it is essential to have adequate visibility; in England with its winding, hilly roads this is the one thing lacking. But what is visibility? It is the evidence of one's eyes; if one can see that the road in front is effectively empty of on-coming traffic then it is safe to overtake. Is there a substitute for direct vision? Yes. And this is the nub of the proposition. The alternative to direct vision is the creation of priorities on the road so that hazards can be negotiated through faith in the priority. Through faith in the priority we can virtually straighten and level all the roads in Great Britain like pulling tight a piece of string.

Green for Go is a priority. It is one and one only of many that could be created with a little ingenuity. Suppose for example, instead of the current three-lanes-into-two at corners the road engineers made up their minds to do just the opposite—leave the straight to look after itself, provide three lanes at all corners on A-roads. English roads are made of corners. Suppose you could pass on a corner. Consider the revolution that would happen overnight to everyday motoring were it safe to pass a truck, a furniture van, a horse box on a corner. This could be done quite simply, as the pages which follow show, by creating a priority at all points on A-roads where direct vision is useless such as corners and undulations by writing on the road and in the central lane the word ON. Traffic approaching in the opposite direction will read this as NO. A priority is created.

NO STANDING

Another problem to be tackled is that of standing vehicles. Standing on A-roads should be illegal but to help the citizen to keep within the law there should be sufficient laybyes to cater for all needs, for caravans, picnics, punctures, for the sudden breath-taking view and for all the amenities such as pubs, cafes, AA and RAC boxes, petrol stations.

Given practical reforms of this sort, reforms which are not absurdly expensive, we can draw the sting out of driver's neurosis, that black frustration which not only takes away our pleasure in driving but causes accidents. And we may even come to think that the rolling English road is not so bad after all.

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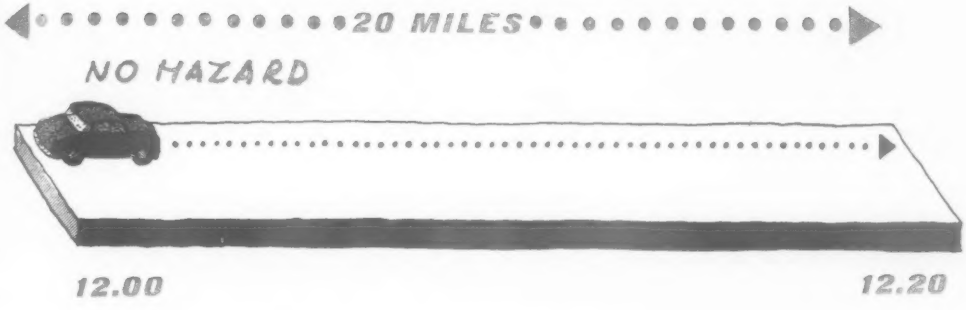
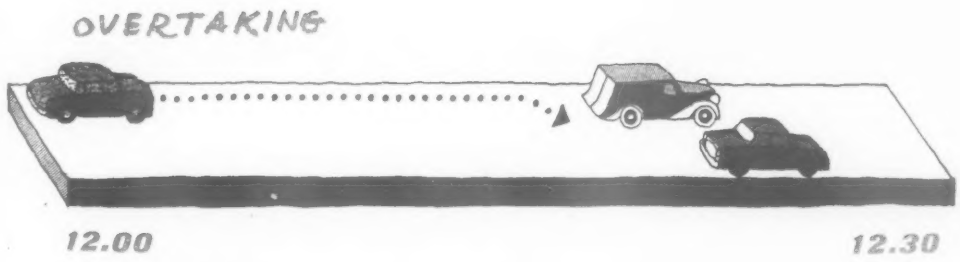
* Cf. *Highway Practice in the U.S.A.*, Public Roads Administration.

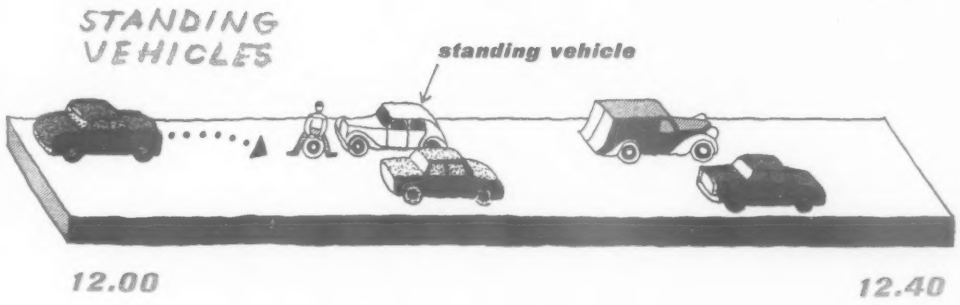
ROAD HAZARDS



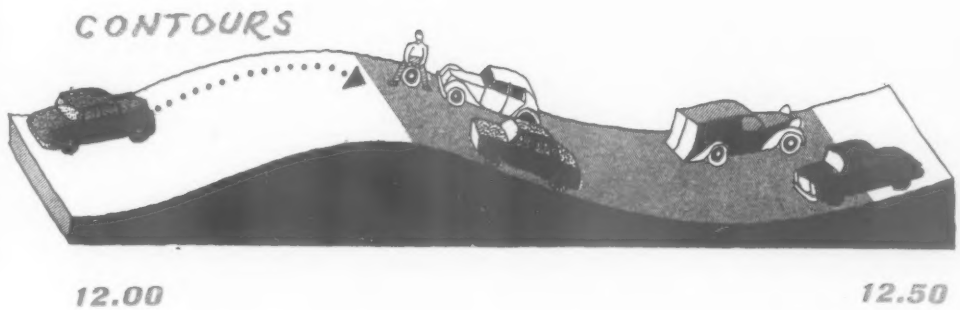
NO HAZARD. A two-lane straight road empty of traffic except for yourself. The car performs to advantage and for you driving is a pleasure. If you so desire you can complete the 20 miles in as many minutes or less.



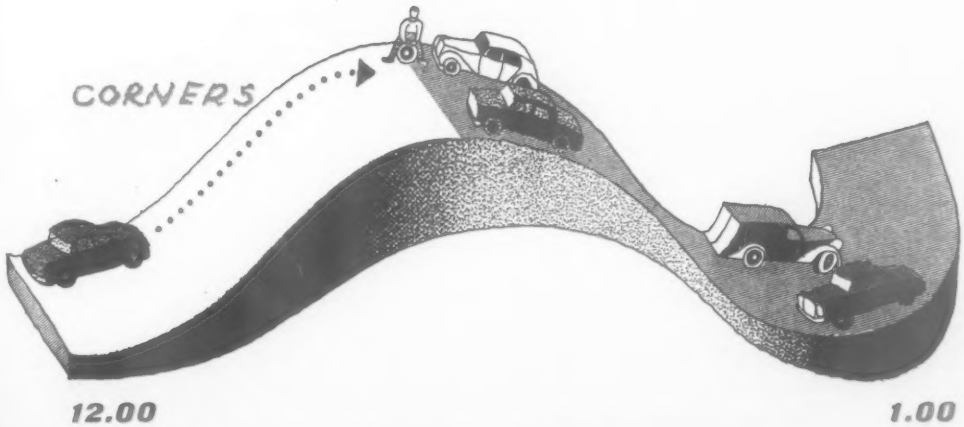
FIRST HAZARD. The first check to travelling at your own speed is the slow car in front which can only be passed when there is a sufficient gap (statistics say ½ of a mile) between oncoming traffic. If this is heavy there is a formidable build up of vehicles behind the slow car.



SECOND HAZARD. Standing vehicles accentuate the problem of the slow moving vehicle and can paralyse long stretches of road. Whereas the slow moving vehicle has a right to be on the road the standing vehicle has none.



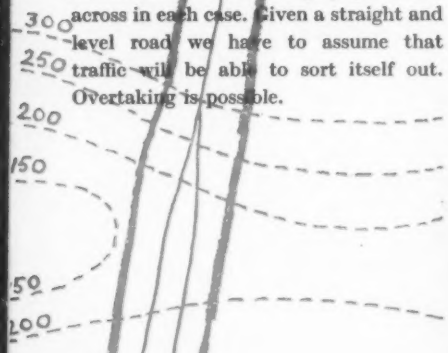
THIRD HAZARD. Where the forward visibility is cut down by undulation (the shaded part of the road, left, represents such a blind spot) the driver is unable to overtake for fear of concealed oncoming traffic. With comparatively slow moving vehicles this is less of a nuisance than with rapid traffic since at speed even a slight dip in the road half a mile away enters into the calculation.



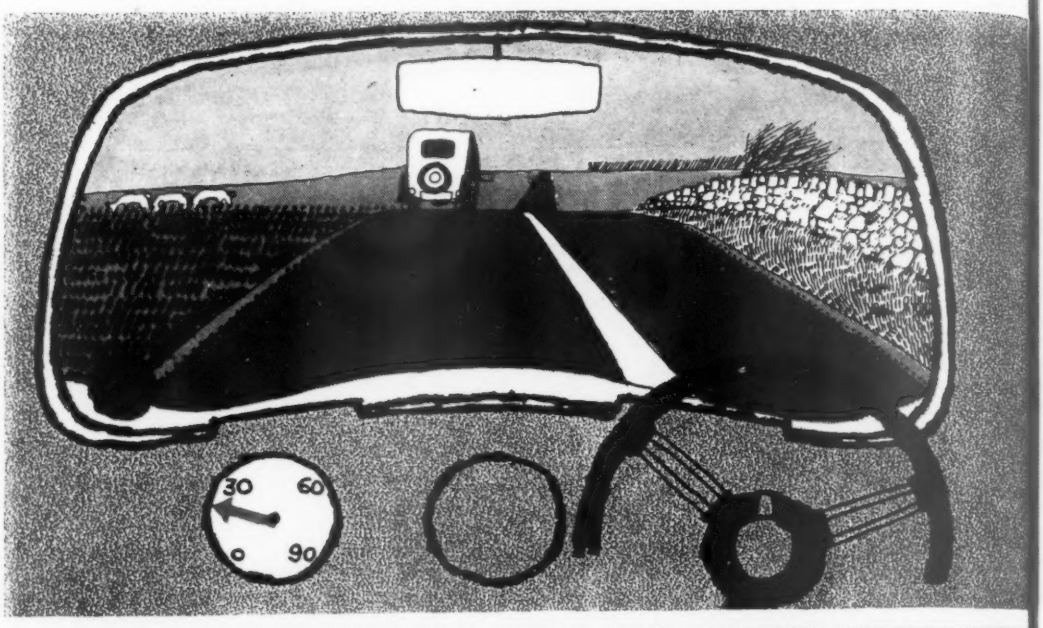
FOURTH HAZARD. Overtaking on corners is ruled out on the same grounds. Lack of visibility compels caution. Yet British roads consist, exclusively of corners, sharp or slow. Even a very gentle curve cuts off essential visibility and the faster the traffic the more forward vision is needed.

ROAD HAZARDS AND...

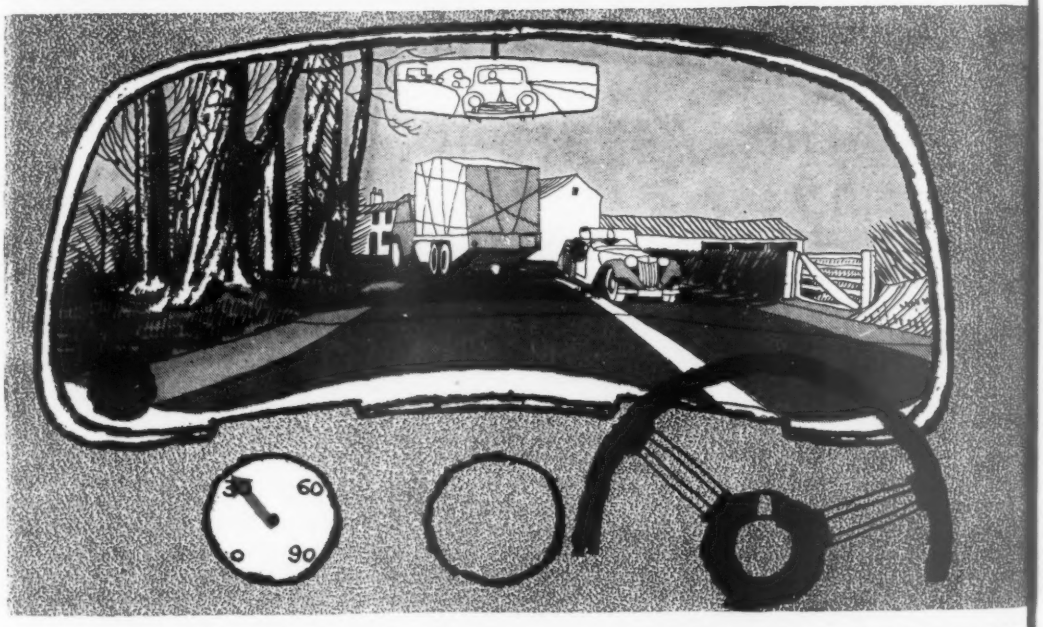
On this page the main road hazards are shown and the proposed cures are indicated on the facing page. Read across in each case. Given a straight and level road we have to assume that traffic will be able to sort itself out. Overtaking is possible.



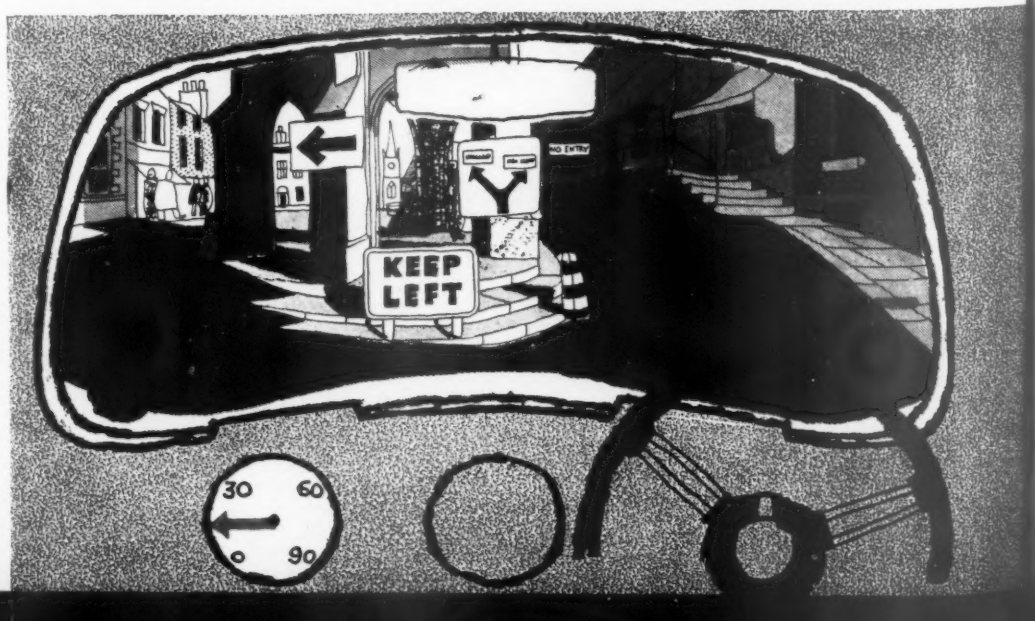
1. CONTOURS. The section of road shown here starts with the problem of the dip which effectively conceals all traffic for the next ¼ or ½ mile. Without the evidence of one's eyes that the road is clear good driving demands that one should wait for the crest of the hill before overtaking. . .



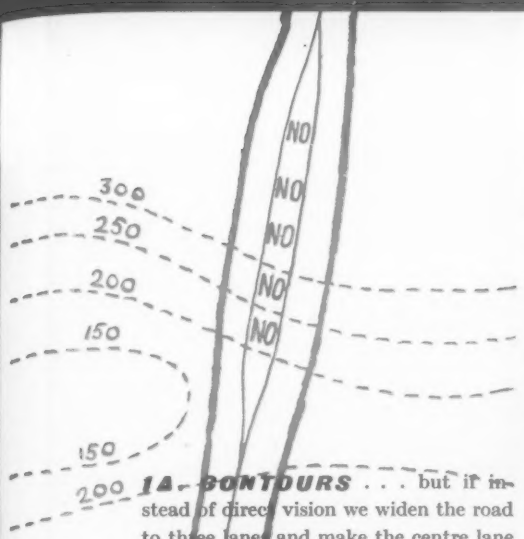
2. CORNERS. We proceed towards the village and the next hazard is a corner. Even if it were not a blind corner it would be extremely hazardous to overtake because of the difficulty of assessing the width of a road not seen axially but . . .



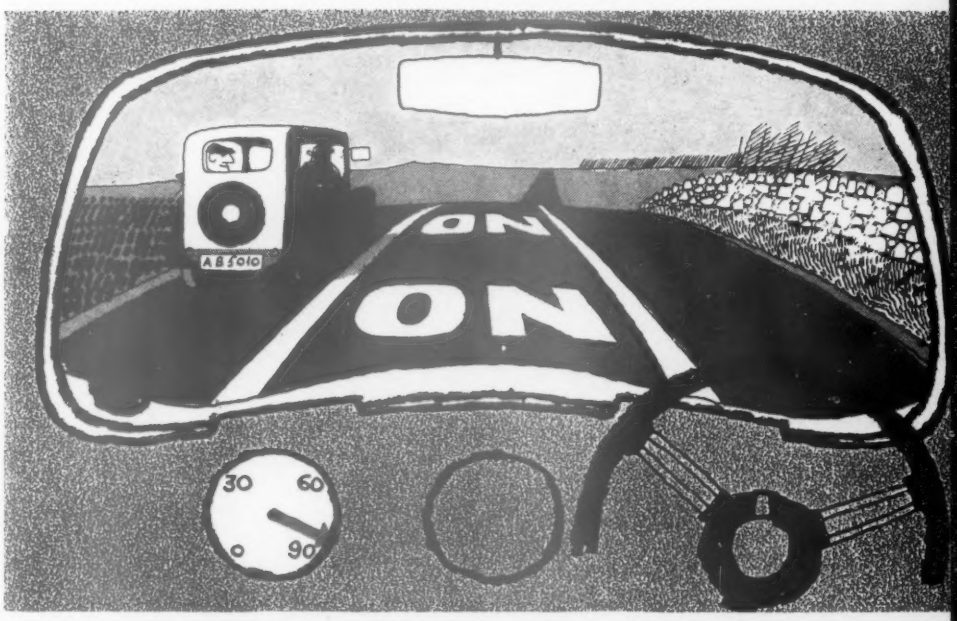
3. BUILT-UP AREAS. This is a different kind of problem but introduced here to demonstrate how the proposed OMNO system can contribute to the preservation of character in built up areas. This view of the entrance to a village is fairly typical. The market cross becomes festooned and hidden by exhortations to keep to the left whereas . . .



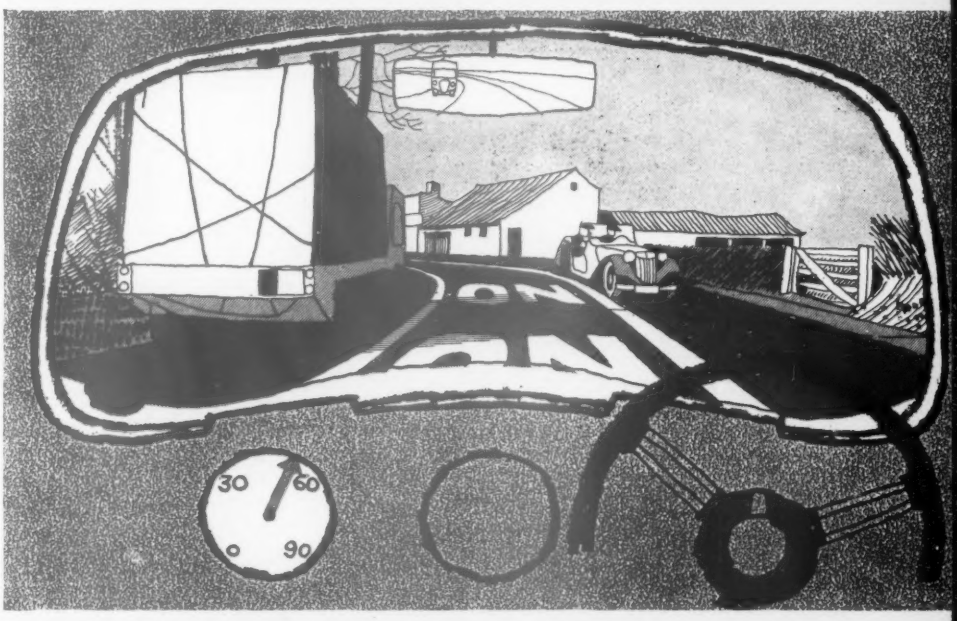
...THEIR CURE

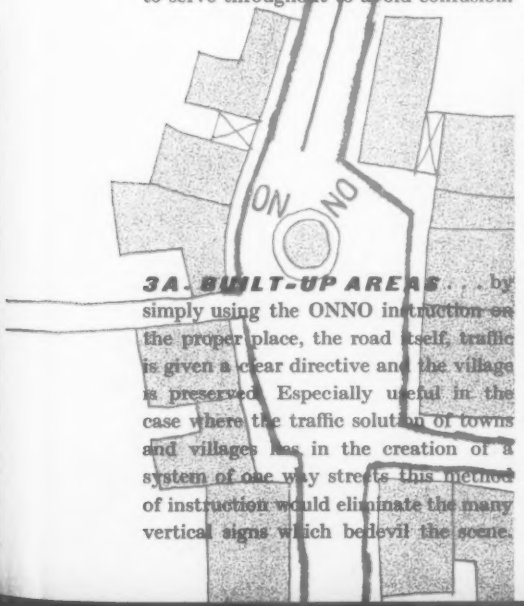


1A. CONTOURS . . . but if instead of direct vision we widen the road to three lanes and make the centre lane a priority lane by the use of ONNO then we can overtake through faith in the priority. In fact we reverse the normal procedure of having three lane traffic on the straight and reducing it to two at hazards. The hazards are the critical point and need the extra lane, the straight can look after itself.



2A. CORNERS . . . by the same device of the priority the corner can be negotiated at whatever speed the curve will allow. Generally speaking a left hand bend will have the priority since traffic turning left generally clings to the kerb thus allowing maximum room for overtaking whereas if the priority were for traffic taking a right hand turn its use would be vitiated by slow moving traffic lazily cutting corners and blocking the centre lane. In the case of multiple bends one priority would have to serve throughout to avoid confusion.





3A. BUILT-UP AREAS . . . by simply using the ONNO instruction on the proper place, the road itself, traffic is given a clear directive and the village is preserved. Especially useful in the case where the traffic solution of towns and villages lies in the creation of a system of one way streets this method of instruction would eliminate the many vertical signs which bedevil the scene.

1

2

3

4

road signs shown on these pages

ON

ONRO priority

approaching non-priority crossroad

30

30 m.p.h. speed restriction

speed limit raised

approaching roundabout

STOP

danger of skidding

8

steep hill gradient indicated

road narrows

G500

garage 500 yards on

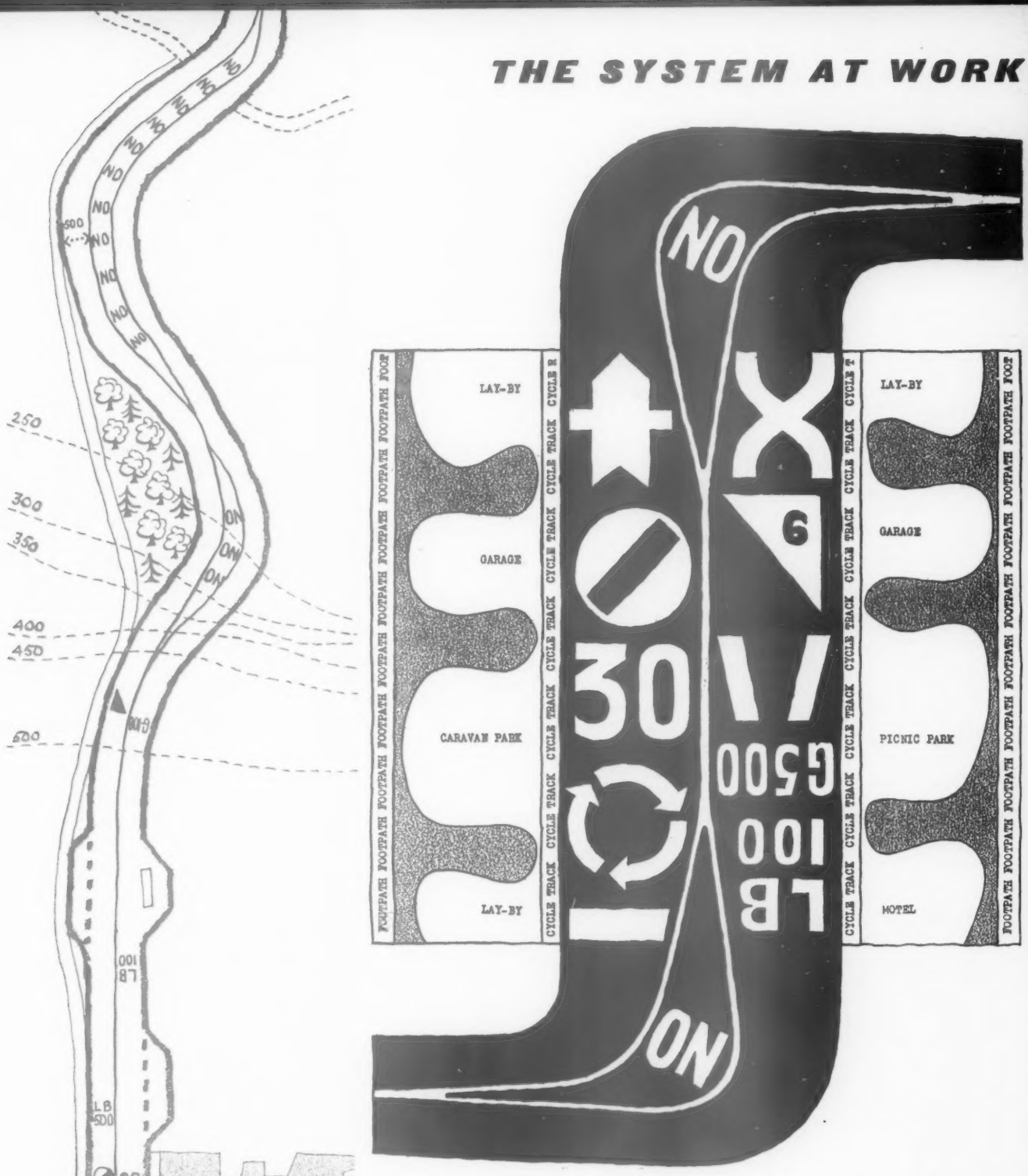
LB 100

lay-by 100 yards on

200

pedestrian crossing 200 yards on

THE SYSTEM AT WORK



Above is a diagrammatic plan of the road; it is, if you like, a piece of road a mile long contracted in the dimension of time by the speed you travel through it, the motorist's visual experience of two minutes' travel.

On corners the priority lane is created with its instruction, ONNO. The road surface is used to give information to the motorist, information concerning speed restrictions, lay-bys, petrol stations, restaurants, pedestrian crossings, and hazards such as steep hills, danger of skidding, road narrowing.

The road verges are regarded as integral with the road in that there would be a planned system of lay-bys for all eventualities whilst cycle tracks are provided (the relative instability of the cyclist causes the motorist to give him so much clearance that the cyclist really counts as a small car in size) and footpaths are shown away from the road.

On the left is a typical stretch of road showing these recommendations in action, the relevant illustrations being on the page opposite 1, relieves the motorist's mind and the pedestrian can enjoy his walk. Below are examples of the application of written instruction to the road surface: 2, steep hill with gradient of 1 in 8 and G(—arage) or G(—as) 100 yards; 3, lay-by 500 yards; and 4, speed restriction of 30 m.p.h. with derestriction sign.

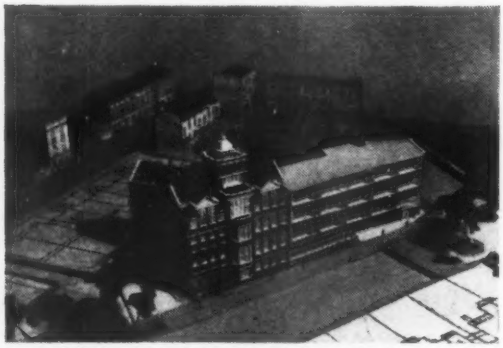
A new road system is a motorists' pipe-dream. The plea of this article is to use our present road system intelligently and do it now.

SCHOOL IN CAMDEN TOWN

ARCHITECTS:
STILLMAN AND EASTWICK-FIELD

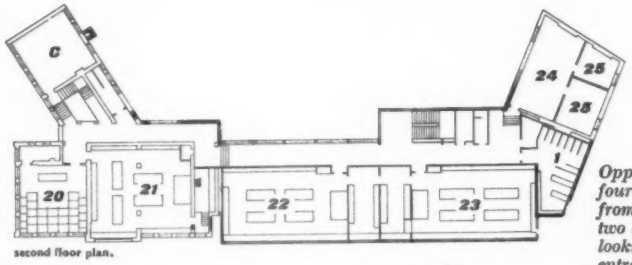
The Camden School for Girls is an aided grammar school responsible for providing its own buildings, with the help of a 50 per cent grant from the Ministry of Education. The site is at the intersection of Sandall Road and Camden Road, and the old school there was badly bombed and was below the current educational standards; at the same time cost made it essential to rebuild on the existing site and make use of as much of the existing structure—which was rather like a London Board School—as possible. The bombing had removed many of the bad features—for example, classrooms facing north, and the hall which was used as a corridor—and by adapting the original semi-basement as the new ground floor and enlarging the centre of the building the school was brought up to M.O.E. standards.

A new centre was grafted onto the old building whose rooms were altered and improved but not radically changed. The new work, providing entrance, dining room and hall on the ground floor and staff rooms, classrooms and laboratories above, is a mainly precast reinforced concrete frame, supporting prestressed reinforced concrete floors and roofs. The columns along the front of the building are at 22 ft. centres to coincide with the partitions

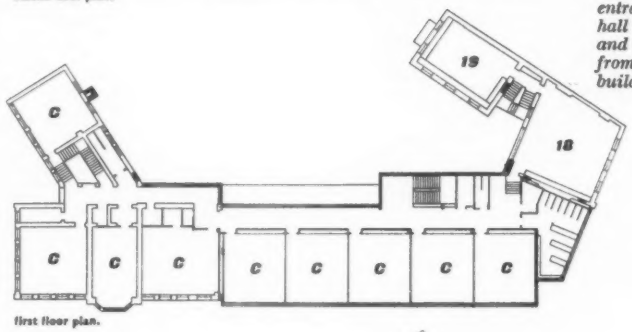


1, *model showing relation to existing school.*

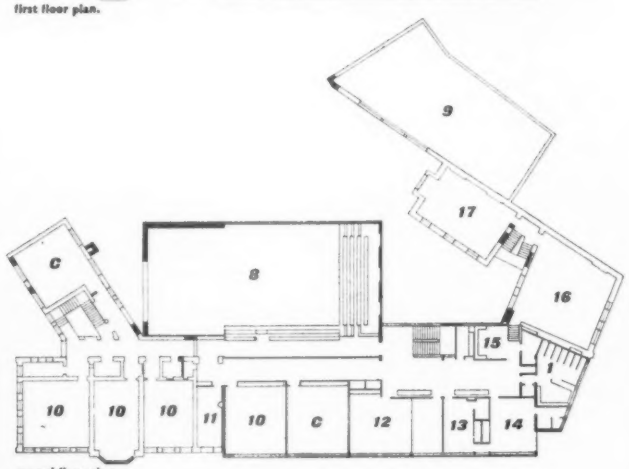
between classrooms, and precast concrete beams between them support the floor units, spanning 34 ft. across the building. The frame is exposed outside without any special treatment or painting, except that the beams forming the cill walls between the columns on the front have been precast with an exposed aggregate finish of calcined flint. Solid wall panels elsewhere are London stock bricks. Inside, the reinforced concrete columns and staircases are painted but not plastered. The entrance hall has Portland stone floor and asbestos faced ceiling tiles; the teaching rooms have linoleum floors and ceilings of predecorated fibreboard tiles. The hall has hardwood block floor plaster ceiling and walls lined with wood panelling and acoustic tiles. The associate-in-charge was Anthony Baynes.



second floor plan.

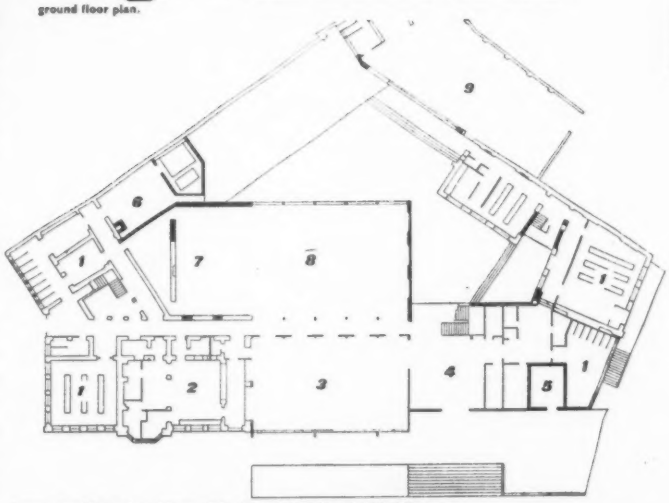


first floor plan.

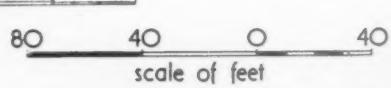


ground floor plan.

key
1. cloakroom.
2. kitchen.
3. dining space.
4. entrance hall.
5. transformer chamber.
6. boiler house.
7. stage.
8. assembly hall.
9. gymnasium.
c. classroom.
10. upper sixth.
11. prefects.
12. staff room.
13. secretary.
14. headmistress.
15. librarian.
16. library.
17. sixth form library.
18. arts and crafts.
19. domestic science.
20. lecture theatre.
21. biology lab.
22. physics lab.
23. chemistry lab.
24. orchestra room
25. practice room.

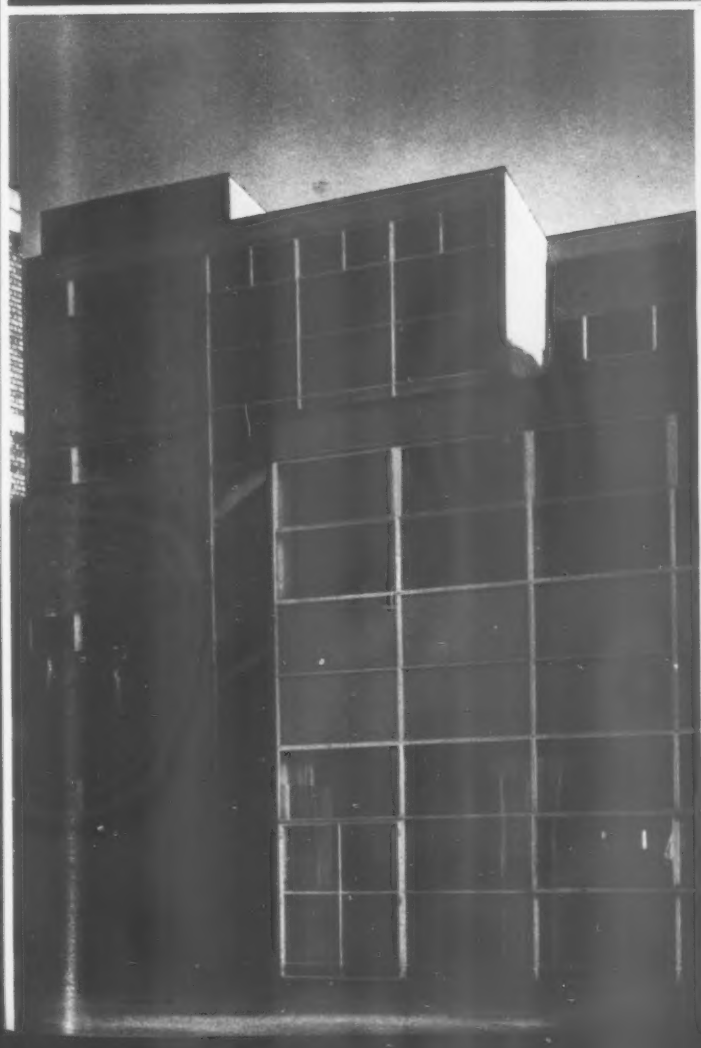


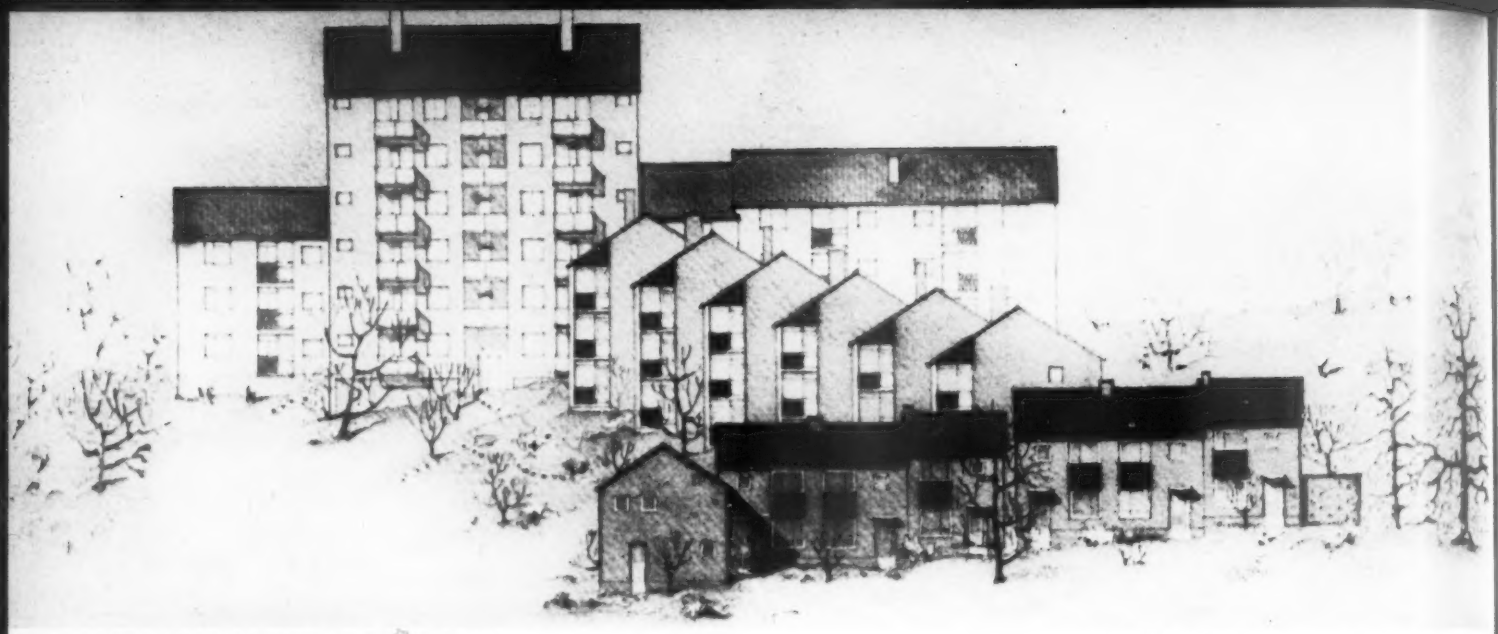
lower ground floor plan. New work is shown either with solid black lines (solid walls) or with thin open lines (windows or curtain walls).



2
3 4/5
6

Opposite, 2, *the new four-storey centre seen from Sandall Road.* 3 *and* 4, *two details of back of stairwell looking through to main entrance; two-storey assembly hall on right.* 5, *main staircase and entrance hall.* 6, *the school from the south, with the old buildings in the foreground.*





7, *elevation of housing as seen from Aylmer Road.*

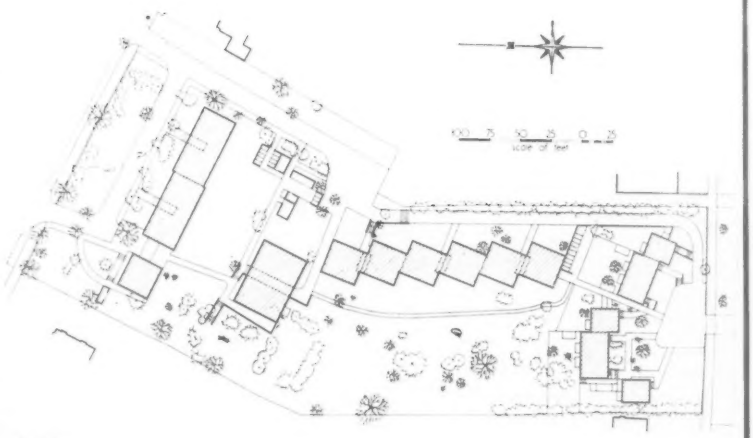
POLICE HOUSING AT HIGHGATE

J. INNES ELLIOTT, CHIEF ARCHITECT, METROPOLITAN POLICE
SENIOR ARCHITECT-IN-CHARGE: S. J. HANCHET

This housing scheme for the Metropolitan Police district* is half-mile north of Highgate village in the angle formed by the Great North Road (Finchley High Road) and the Barnet By-Pass (Aylmer Road) with frontages on both main roads, and a fall of 30 ft. from N.E. to S.W. The six-storey block is on the centre of the site with fine views south-west over Highgate Golf Course and three-storey blocks run downhill from the tall block, being staggered to give all living rooms the advantage of the view. Detached houses face Aylmer Road to 'harmonize with existing development' and keep the existing fully grown trees, and three-storey terraces front the Great North Road. A pedestrian way runs through the site, passing under the tall block.

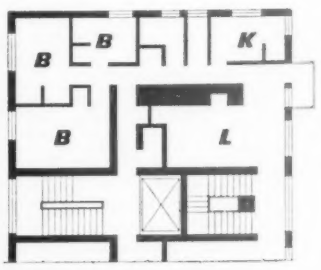
The scheme provides 52 married quarters; 45 flats and 7 houses. The six-storey block has a reinforced concrete frame and 11-in. cavity brickwork cladding with grey facing bricks. The three-storey flats and houses have 11-in. load-bearing cavity walls with golden brown stock brick facings. The panels below windows and on staircases are cedar shingles.

* Appeared as a preview, A.R. Jan. 1956, page 33.



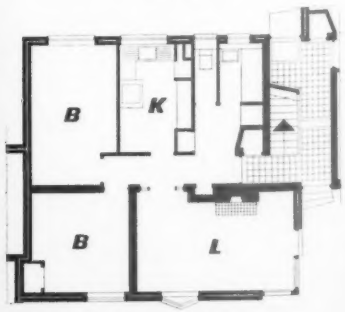
site plan.

8, *left, and* 9, *right, the path running through the site, seen from Aylmer Road.* 9 *shows the six-storey block.*



typical flat, six-storey block.

20 15 10 5 0 5
scale of feet



typical flat, three-storey staggered terrace.

10, the block as seen from the road intersection: laboratories on the left and administrative offices on the right. **11**, *the pool from one of the staircase landings, showing terrace (roofing the fountain pumps) which can be used as a tearoom extension.*

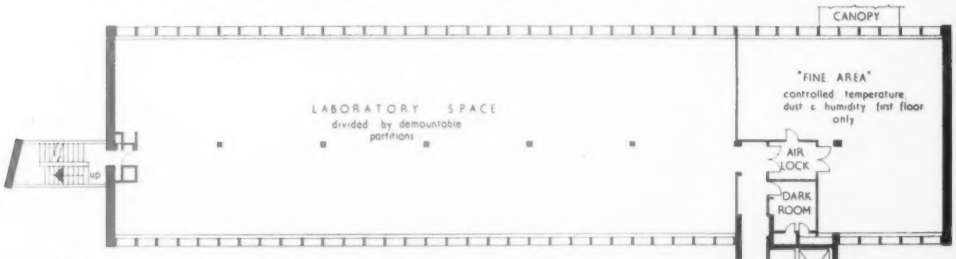
LABORATORIES AT ENFIELD

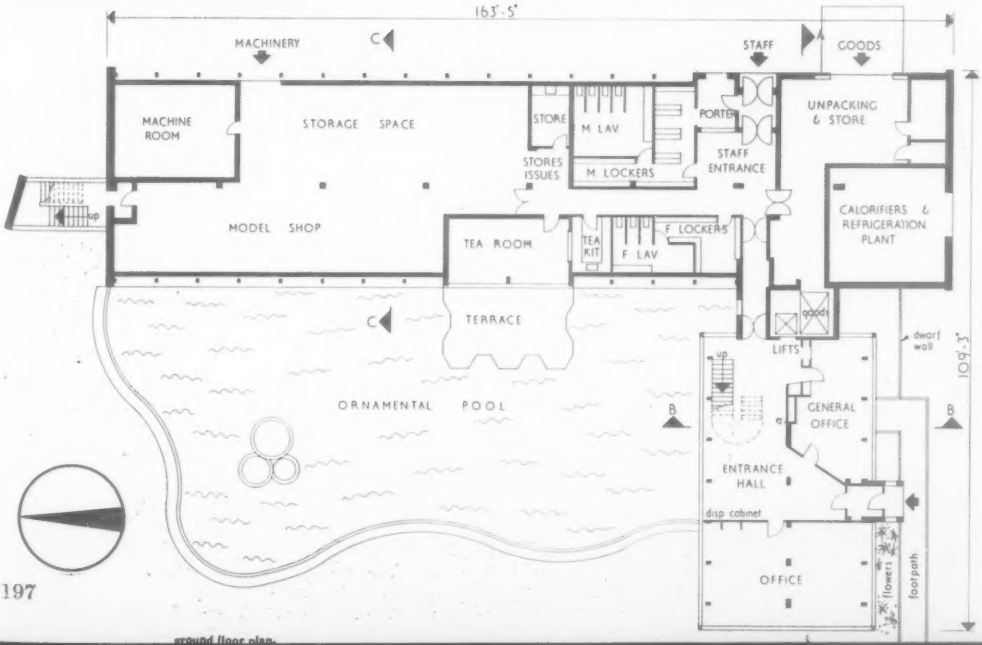
ARCHITECTS, G. A. JELLICOE AND PARTNERS
PARTNER-IN-CHARGE, ALAN BALLANTYNE

The Sylvania-Thorn Laboratories are the first to be built in Britain for research into colour television, and because the problems involved are unpredictable, all the laboratory space had to be completely flexible with demountable partitions. The site is at the junction of the Great Cambridge Road (A10) and A110, a mile east of Enfield, part of a large area being developed by Thorn Industries; fortunately so, for the M.O.T. did not permit vehicle access from either road and road access is from the S.E. corner of the site, as part of the permanent development scheme.

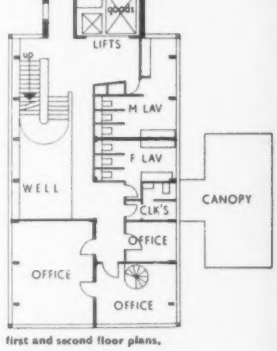
The building provides four-storey laboratories and three-storey office administrative offices forming an L-shaped block with a lift shaft between them. Construction throughout is reinforced concrete frame with hollow pot floors and roof (part of the laboratory roof is paved for outside experiments) on a 4-ft. module. In the offices the columns are set back from the floor slabs, resulting in a continuous curtain wall providing space in front of the columns for the pipes feeding the convectors; in the laboratories the module reads externally with reinforced concrete mullions faced with artificial

11





ground floor plan.



first and second floor plans, scale: 1/32 in. = 1 ft.

12, *staircase in entrance hall, showing cranked-slab construction.*

Laboratories at Enfield

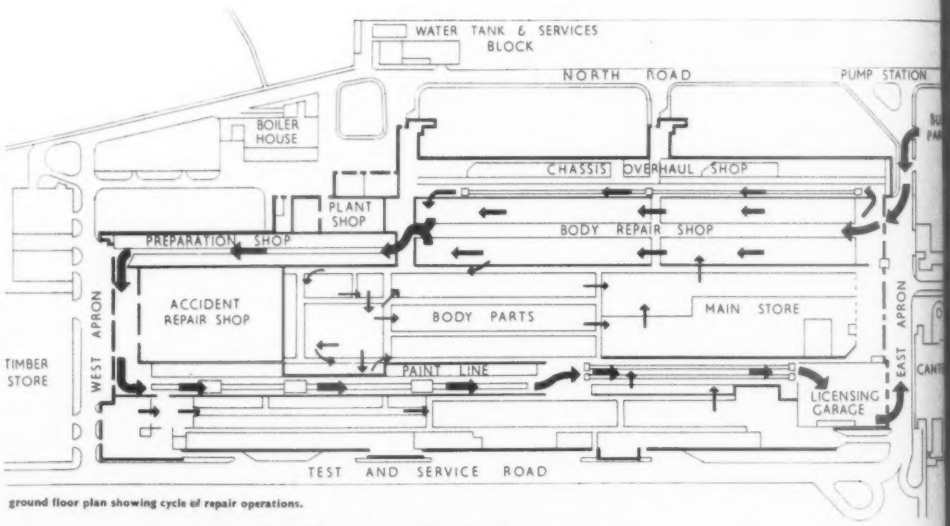
Portland stone caps. The demountable partitions are sheet steel with glass-wool filling; any unit can be removed in 7½ minutes without disturbing a run of partitioning. The machine shop on the ground floor of the laboratory block has a 9-in. concrete floor floating independently of the main structure to isolate machine vibrations; there is a six-hour firebreak between laboratories and lift shaft.

The pool in the angle of the L provides cooling water for the refrigeration plant and laboratories and low grade heat for the heat pump. The terrace projecting into it is a roof to pits housing the fountain pumps and the colour-change equipment for floodlighting; it has black and white granolithic slabs laid to form a pattern of squares and hexagons. The main staircase in the entrance hall is a double cranked reinforced concrete slab, with white terrazzo treads and black terrazzo risers. The hall itself has walls veneered with Indian silver-grey wood and a floor of Carrara and Sicilian marble chippings in a yellow matrix.

BUS GARAGE NEAR ELSTREE, HERTS

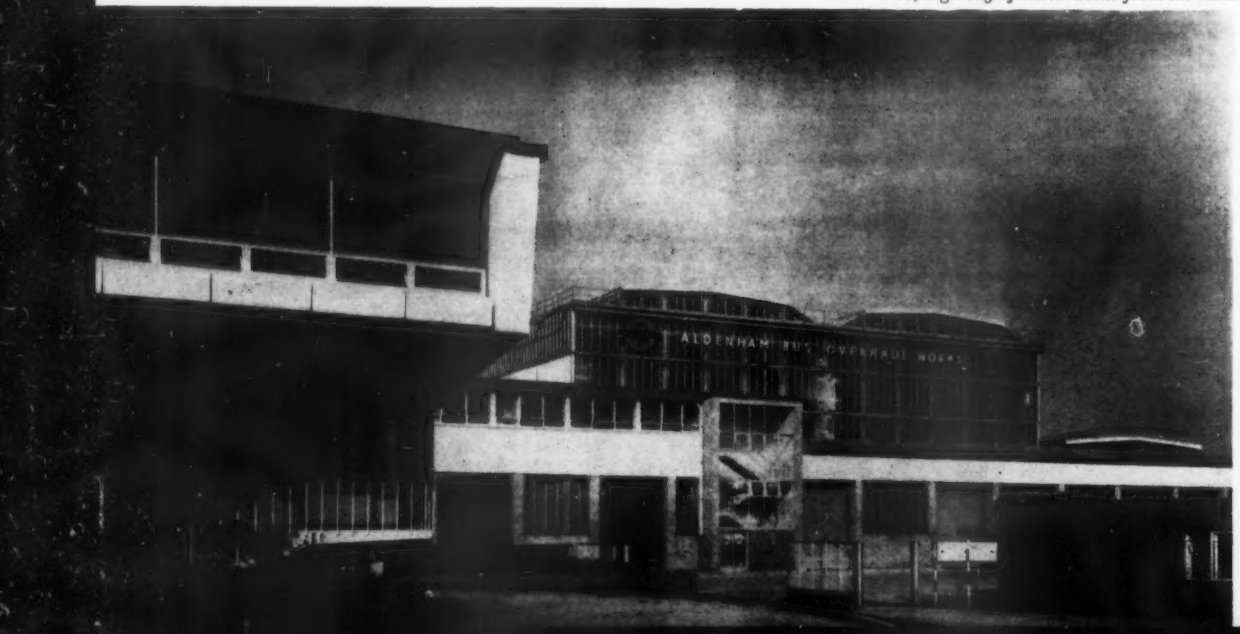
L.T.E. ARCHITECT, THOMAS BILBOW
ARCHITECT IN CHARGE, K. J. H. SEYMOUR

This is the largest bus repair works in the world—it will eventually employ 3,500 people—built to serve London Transport's 8,000 buses when the fleet outgrew the original works at Chiswick. It is built around a railway depot which was built before the war, covers seventeen acres, and is, unhappily and unjustifiably, in the middle of the London Green Belt, beside the Watford Bypass south-west of Elstree: special Parliamentary permission was needed for its construction. The circulation of buses under repair is shown on the plan; all the factory sheds are steel framed, clad with aluminium, patent glazing and an asbestos cement and glass fibre sandwich. The body repair house has a clear headroom of 50 ft., enabling any bus to be lifted by overhead crane and carried over others in the shop; the other shops have clear headroom of about 20 ft. The boiler house is steel framed and clad with brick, patent glazing and asbestos cement sheeting.



ground floor plan showing cycle of repair operations.

13, *high bay of main works from the east.*



EAST APRON

BOOKS

COLLABORATIVE ARTS

ART IN EUROPEAN ARCHITECTURE *By Paul Damaz. Chapman and Hall (for Reinhold Publishing Corporation).* £5.

A companion volume to Eleanor Bittermann's *Art in Modern Architecture* (which dealt only with the USA) has been a piece of required publishing for some time now, and Paul Damaz's book has provided a full documentation on the more interesting European examples of buildings where painting and sculpture have been more extensively employed than usual. The works described and illustrated range from Priory Green to Ronchamp, from Hatfield Technical College to the MV *Andrea Doria*, from the Festival of Britain to the Triennale. If anything, the coverage tends to be unselective, and this is a little surprising since the book is subtitled *Synthèse des Arts* and the text appears to subscribe unreservedly to the dogmas of *Groupe Espace* aesthetics. Nevertheless, much of the art is far from abstract, much of the architecture far from International Style, and much of the mating of one with the other has the quality of a shot-gun wedding rather than a marriage of true minds. If synthesis is *ipso facto* a good thing, as M. Damaz and *Groupe Espace* appear to believe, then—on the evidence of this book—it is a virtue that escapes the collaborative team, for the most fully synthesized, most fully integrated buildings are both the virtuoso performances of single minds—Le Corbusier's *Nôtre Dame du Haut* at Ronchamp, and the Ideal Palace of *facteur* Cheval at Hauterives. On the other hand, the one building that catches the eye and sticks in the memory after the book is closed is *Nôtre Dame de Toute Grâce*, at Assy, presented in two fine colour-plates from *Life* magazine, that reveal just how magnificent a vehicle for the art of Leger, Matisse, Lurçat and Rouault this little church of Maurice Novarina has proved to be. But no one would pretend that it is great architecture, and it seems very much an open question still whether architecture of genius can tolerate applied arts of the same rating, or *vice versa*, or even whether it should. Q.S.C.

THE MYLNE DIARIES

ROBERT MYLNE, ARCHITECT AND ENGINEER, 1733-1811. *A. E. Richardson, PRA., FRIBA. Batsford.* 1955. 30*s*.

This is the first published monograph on Robert Mylne and as such ought to be greeted tenderly. Responsible for rescuing Mylne from oblivion when he purchased some folios of this architect's drawings many years ago, Professor Sir Albert Richardson deserves enormous credit.

It is, therefore, most disappointing that this book should be so unsatisfactory. Purporting to be a biography, from the jacket, it is nothing more than Mylne's entire diaries printed in full with an introduction that seems largely irrelevant and rather inaccurate. Surely, too, there should be some acknowledgment of the sources? Now, diaries can be fascinating to students of a particular subject or period, but to the general public—or even to the architecturally interested reader—they are desperately dull. The introduction is but a rehash of the sort of entry to be found in the DNB combined with the author's inimitable and all too familiar pæan to the Georgian life of two centuries back.

The opportunity to assess Mylne's valuable contribution to the architectural and engineering achievements of the second half of the eighteenth century has been misused tragically: one hopes not irredeemably. The author busily boosts Mylne's engineering faculties to the detriment of his architecture; he lays disproportionate stress on the superb draughtsmanship revealed in the folios and seems muddled in his views concerning Mylne's status alongside his colleagues. Why illustrate his buildings almost to the exclusion of his engineering works; why illustrate the quality of his draughtsmanship by perversely redrawing so many of his designs in a loose manner—the sketch of the Belfast hospital is lamentable—and why bother to present Mylne as a subject for study unless some assessment of his influence is attempted?

One example of inaccuracy is in the reference to the New River Offices. These were never situated at Clerkenwell but at Whitefriars. The elevation illustrated may be compared with the plan shown on Horwood's map of Blackfriars (1799). It is obvious that Mylne, in his capacity as town planner for that area, was instrumental in acquiring the site in Dorset Street for the New River Company, for whom he acted as Surveyor and Engineer.

All in all, despite its limited use, this volume does Mylne a disservice.

Christopher Gotch

Shorter Notices

SPECIFICATION 1956. *Edited by F. R. S. Yorke and Penelope Whiting. Architectural Press Ltd.* 30*s*.

The most important addition to this year's *Specification* is the rewriting and the insertion of twelve new editorial pages into the Concretor's Section. For this marks (a little belatedly perhaps) the transition of concreting from the slap-happy, spade-and-slosh period to scientific control. Another addition, in the Plumber and Sanitary Engineer's Section, summarizes what we know about single-stack plumbing, giving a useful LCC Information Sheet showing the setting out. This cost-saving system has for some time been *permissible* by all local authorities who have adopted the new Model Byelaws, and the indications are that most district surveyors in these areas will let it through. Among the many other minor revisions in this issue is that part of the Mason's Section which deals with the availability of building stones, and the quarries working them. Architects will lament the dropping out of Ham Hill and Hopton Wood, but will welcome Buckfastleigh, a 'hard blue mountain limestone,' and Blaxton, a 'cream coloured freestone' from Elsdon, Northumberland. Neither of these stones is 'new' (if a stone is ever such): they have been worked for years; but it is useful to architects to know that they are going strong. I.W.W.

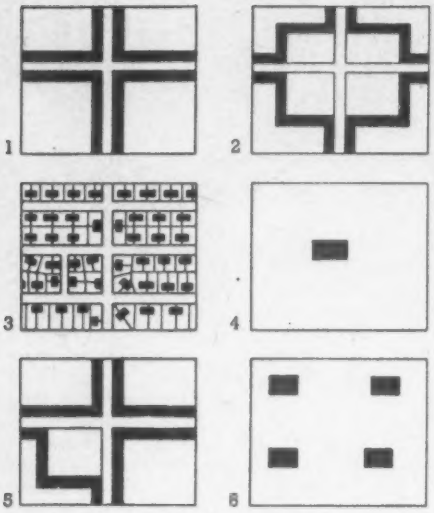
COUNTER-ATTACK

FAILURE OF THE NEW ANALYSIS

When THE ARCHITECTURAL REVIEW *announced the Failure of the New Densities as an explanation of the Failure of the New Towns (and incidentally of a lot besides), the analysis was made solely in terms of area-densities.* We were invited to distinguish between different kinds of measurements, but area-density—ratio of area and objects contained—was alone considered. The question remains unanswered whether with much higher density of this sort the new towns would be any more satisfactorily urban if the kind of planning involved remained substantially the same. If twice as many people lived in the area now covered by Crawley Garden City, would it be any the less a desert if the method of distributing house-units didn't alter?[1]

Of course one could claim immediately that it would take up less space; and so more of the country would remain. From the town's point of view, one might say that it had gained the advantage of being easier to get out of. But what of the town as town? Would it be any the less a collection of villas? Mr. Furneaux Jordan, calling Harlow a town of semi-dets, was corrected, and replied, 'Well they look

[1] It even appears that Letchworth has a higher area-density than most of the New Towns.



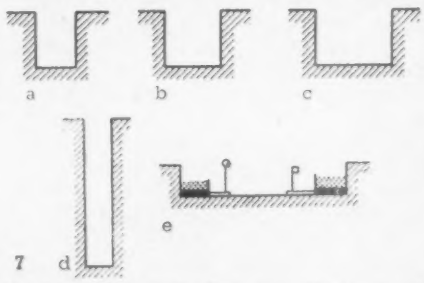
semi-dets.' And of course so they do: whether in fact they are seems strangely irrelevant.

Four ways of housing people at the same gross area-density are sketched in diagrams 1 to 4. 1 and 2 are old ways, 3 and 4 are new. 1 and 2 may well indicate a very low density over the whole area, lower perhaps than is claimed for the New Towns.[2] A very large amount of open space is available in *back* gardens, or it may become public in the front, 2. (2 may be regarded as a variation of 1, since the ratio of public to private space can clearly be varied—see 5.) Now see what happens when the terraces of 1 and 2 become semi-detached: the gardens are inevitably much smaller, because so much space has to be taken up by roads, edging, and gaps between houses, 3. The amount of usable space is far less. Hence the ironical fact that there is much more usable free space in a town built on closed planning principles than in one which follows the rule of open planning, even though the area-density of the former may be greater.

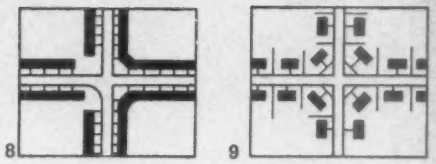
4 shows an *n*-storey block of flats: it obviously can't by itself constitute the centre of a town, and it has lots of air round it, so let's raise the density, 6. Result, four blocks of flats, no town. Or double the height of 100 semi-dets, producing 4-storey flats. Result, a density twice as high but still 100 semi-dets, no town. In fact, in the planning of a town one may stumble just as hard over the individually conceived block of flats as over the commercially engendered semi-detached. By far the most important virtue of the Powell and Moya flats in Pimlico is their ability to become part of a street (see especially Lupus St.), a success usually only achieved when a block is made to fill a gap in otherwise continuous building. What may happen when this is not the case is amply shown at Hallfield, where the idea of a street is nowhere, or on the Ackroyden estate, which is merely a loose collection of Things in Parks. (That they are big things doesn't prevent their remaining Things.) Of course many of the happiest effects of townscape are achieved by isolated buildings standing out from a street line, but the street must first be there to provide a contrast. Hallfield is just tolerable because there are streets round it, though it can hardly be claimed to be a distinguished element of townscape: but that kind of thing multiplied over and over results in the end in the absurdity of Corbusier's 'Voisin plan' for Paris, in which the city would be turned into a collection of very, very big individual units: for all the vast scale of his conceptions, Corbusier remains essentially a builder of villas. He depends on and claims only local success—each building to speak for itself alone. But it is not true that the bigger the individual units the more cohesion they have: a town is one unit, with parts designed in relation to one another and to the whole.

All this indicates that area-density, however measured, cannot constitute an accurate test of urbanity. Much more important are two forms of what I shall call street-density. Longitudinal street-density is the ratio of building frontage to total road length (excluding intersections). It can be briefly and roughly asserted that, as far as a town is concerned, the nearer this is to 1 the better. If it gets below a certain point, say 7/8, any further reduction will make no difference.

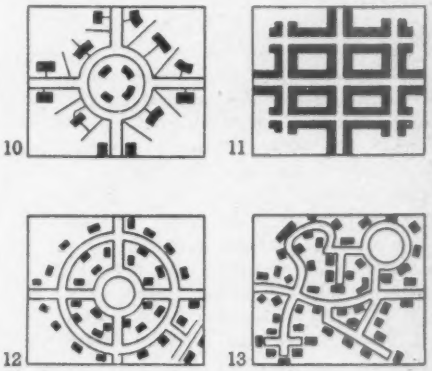
Transverse street-density is the ratio of height of buildings in a street to distance between them. Here it is obviously much more difficult to lay down rules, but a density of $\frac{3}{4}$ to 1 tends to be a good average,



7a, b and c; whereas something much higher produces the canyon of New York (7d) and something much lower the suburban desert in which houses are thrust apart and denied a proper public face, 7e.[3] The close connexion of the two forms of street-density is shown in the progression of diagrams, 1, 8, 9, 10. As soon as you begin putting houses well back from the road (and so reducing transverse density), 8, it is a small jump to splitting them up so that the longitudinal density also drops, 9; and the two processes then go hand in hand, 10. Moreover, while 1 leads to 11, 10 inevitably develops into the emaciation of 12. 11 and 12 again emphasize how a compact layout leaves more usable open space, even though the area-density may be higher.



It appears in fact that we need to revise our definition of sprawl, to re-examine how it arises. The important thing to see is that it does not depend on a low area-density alone (central Cambridge has a very low area-density but is compact and urbane, because the open space is intelligently organized), but on this *plus* low street-density. A close network of streets will make for urbanity only if the street-density is also high; otherwise we merely get the familiar whimsical effect of 13.

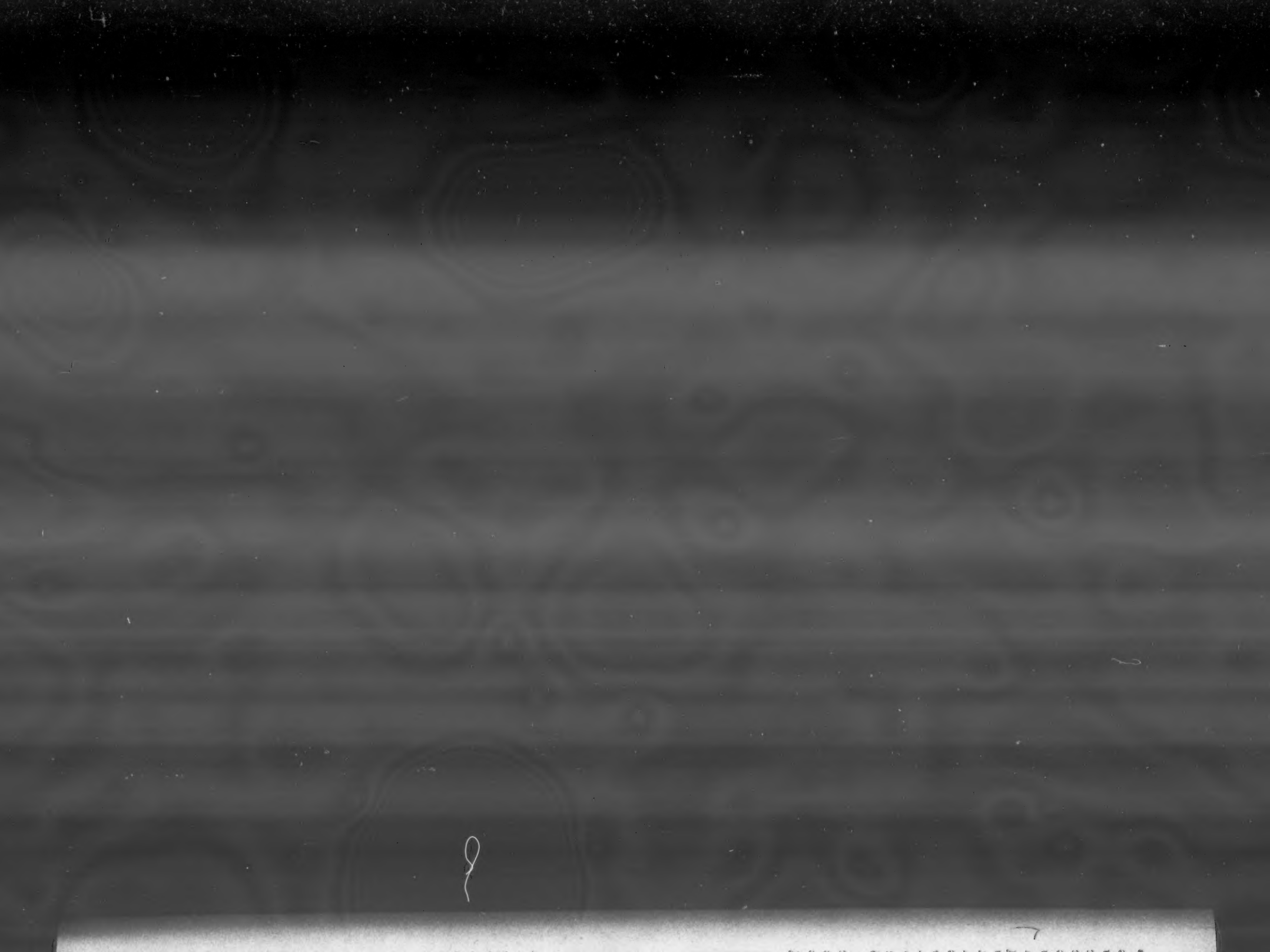


Of course low street-density tends to mean low area-density, and conversely; but the two are not *necessarily* connected, and it is street-density which is the determinant of urbanity. This explains how a New Town (and perhaps even some suburban housing estates) can apparently have a 'higher density' than many of our best towns, and yet as a town be an absolute farce. It's all a question, not of how much open space there is, but of how it is spent. Organize it into squares or in back gardens that can be used, and the result may be splendid; sprinkle it about in roads that are too wide, in useless front gardens and in idiotic scraps between every other house, and inevitably the end-product is subtopia.

Ander Gomme

[2] The defenders of the New Towns point out that their gross over-all densities or their net average densities are higher than so-and-so: they do not explain how this makes them satisfactory towns.

[3] There are obviously many exceptions: streets can have much higher densities without becoming intolerable (Trinity Street, Cambridge, The Shambles, York, and the streets of most Italian towns which successfully manage a density of 3, 4 or even higher); or much lower (Beaconsfield and Thame High Streets, or any market place), though here, as the examples suggest, a definite feature must be established if the street is to remain a unit—compare the trees in Cheltenham Promenade or the grouping of buildings *round* market squares. Sometimes this feature will itself be an isolated building—Amersham Town Hall.



ARCHITECTURE

STADT THEATER, MUNSTER

Complex in its functional organization, resourceful in its aesthetic realization, the new civic theatre at Munster, West Germany, is one of the most sophisticated buildings erected in Europe since the War, Italy not excepted. The design—a competition winner by the team of Deilmann, von Hausen, Rahve and Runau—makes intricate use of a difficult site hemmed in by existing buildings of historic interest, and broken into by the ruins of another. These given factors, plus the unavoidable need for length on the axis of the stage and auditorium, favoured diagonal siting, a solution that is registered externally on one façade, with its saw-tooth plan to accommodate the exit stairs (see frontispiece, p. 154) but not on the other, 1,

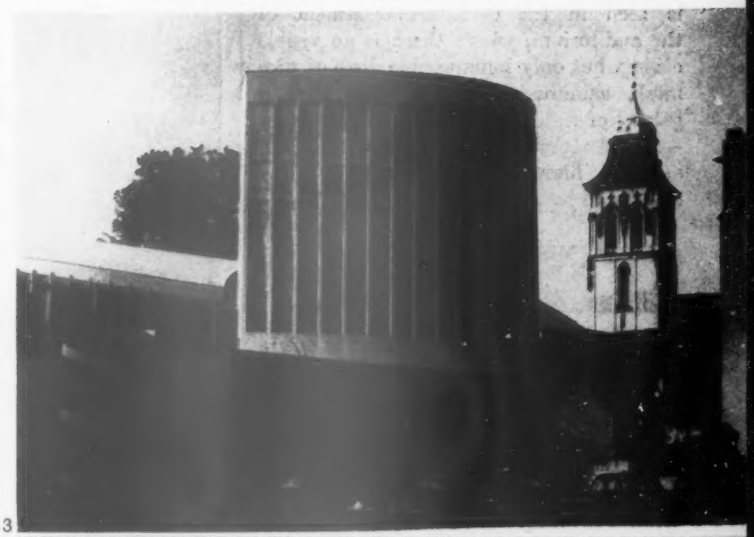
1

where the restaurant block is aligned with the pavement, leaving an open court at first-floor level, through which rise the ruins of the eighteenth century Romberger Hof, 2, which, with the adjoining Old

2

Town Hall and St. Martin's Church, is one of a series of foils, in form and feeling, to the new building.

The tower of St. Martin's, indeed, even obtrudes into views of the rear of the theatre, 3, in strong contrast to the two bold, curved solids, the one glazed, the other opaque, that house the upper parts of the auditorium and the stage, respectively. In spite of the irregularity of the outline of the composition, the planning of the entrance facilities at ground-floor level, **b**, and the foyer at first-floor level, **a**, is effectively symmetrical, and above this point the stairs and access corridors to the circles and boxes are housed between the outer glazed wall of the auditorium block, and the inner solid wall of the auditorium proper, **c**. Owing to the extremely steep rising rake of the stalls, and the fact that the circles are raked as well, these stairs and corridors have to accommodate a large number of different landing levels, and this gives the circulation great three-dimensional complexity and richness, **d**. Another kind of three-dimensional richness, 4,



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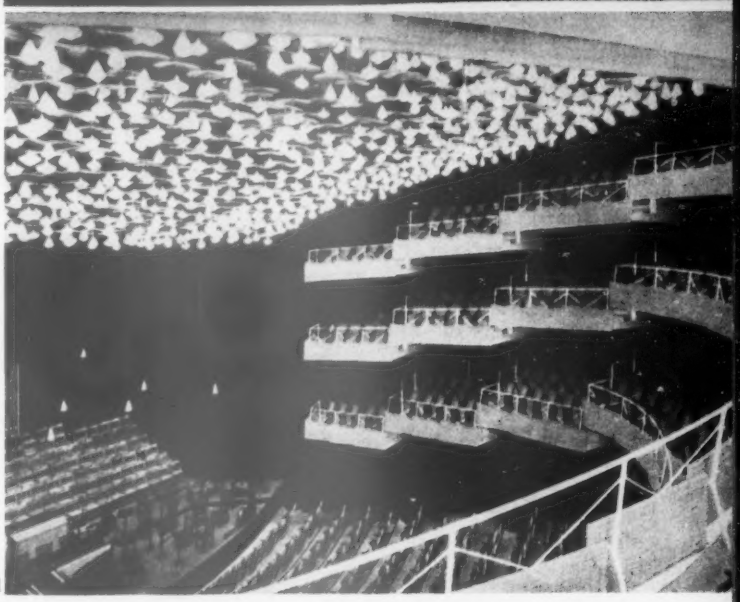

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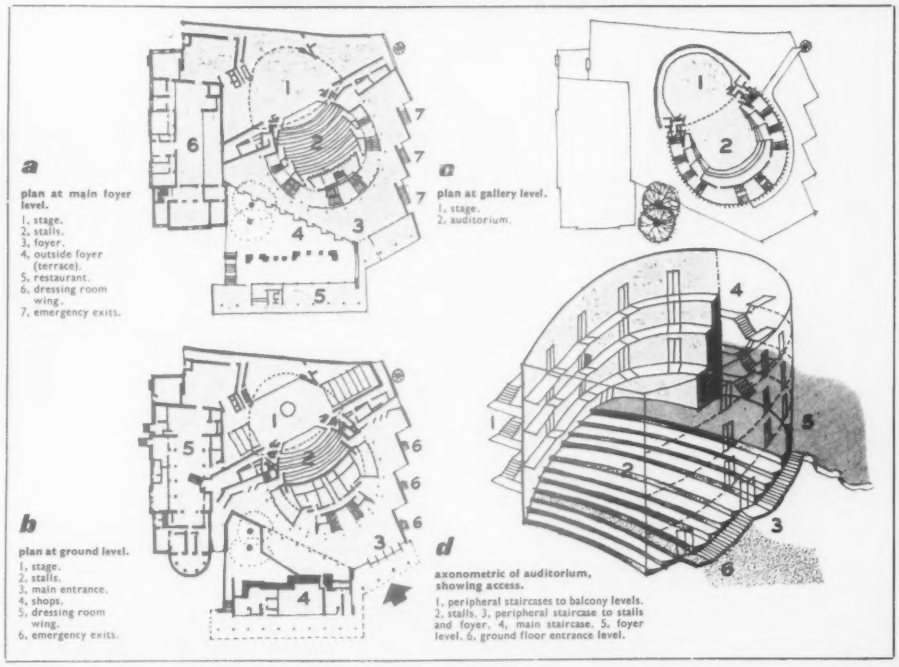


is seen in the overhead treatment of the auditorium, where there is no visible ceiling, but only innumerable discs of wire mesh, shimmering in the light from a galaxy of differently shaped lamps below —a bold attempt to use the possibilities of artificial illumination in the way they deserve to be used. P.R.B.

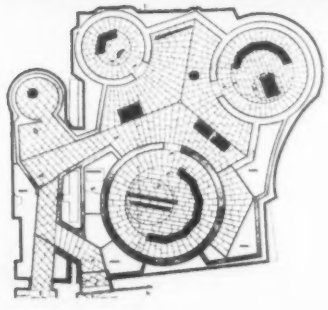
WORLD

TREASURY IN GENOA

A museum with permanent walls, not movable screens, and localized fenestration, not all-over lighting, is an almost shocking conception now that flexibility and standardized illumination have become unquestioned ideals. Yet Franco Albini in the Museo del Tesoro, *Genoa, has flouted this dogmatic approach* with a degree of success which is its own justification, and designed a museum of character—not an abstract exhibition-box.

The functional programme demanded a design of the utmost originality; it was required to house the treasures of the Cathedral of San Lorenzo in such a way that they might be seen by visitors, but were still readily accessible for liturgical purposes. Since some of the treasures are quite massive works of art, haulage distances and vertical lifting had to be kept to a minimum between treasury and sacristy, yet space adjacent to the cathedral floor was almost non-existent. The solution—something of a stroke of genius—was to excavate the treasury below the level of the minute courtyard between the apse of the cathedral and the archbishop's palace; and to use this space to the full, as a view of the foundations, 1, shows (apse at top, court wall of palace at the left). Even so, a high water-table (the

1



2

3

4

5

cathedral is not much above sea-level) and the established level of the paving of the court left a bare ten feet of depth in which to work, and to dispose the complex of circular cells and irregular halls that comprise the exhibition space, 2.

The visitor, entering by the dog-leg passage from the cathedral (the clergy have a straight hauling-way from the lower sacristy), finds himself first in a polygonal hall from which he can see, straight ahead, 3, the first circular cell, containing one of the greatest of the treasures, the chalice of the Holy Grail. To his right a passage leads into the main

6 hall, 4, containing, among other things, the chest of Corpus Domini and a Baroque silver statue of the Virgin, 6. Here, as will be seen, the pattern of the ceiling beams radiates from centres outside the hall itself, centres that are the *oculi* of the quasi-domes that cover the three circular cells that flank this hall, an effect that is echoed in the floor pattern, 2. These *oculi* serve their traditional purpose of admitting daylight, *via* glass ports in the pavement of the court, the light falling in exiguous and moving beams, 5, that introduce a random but 'lifelike' factor into the carefully controlled lighting of the exhibits, heightening the sense that this is not just a museum where unwanted masterpieces have come to rest, but a real and useful strong-room for priceless objects that are still in use, a stone-built and subterranean repository in a tradition that goes back to the Mycenean treasury of Atreus.

Michel Santiago

EXHIBITIONS

PAINTING AND SCULPTURE

Fast falls the eventide, and amid the encircling gloom of a country lane, a bent old man and his little grandchild have been subjected to a ruthless reduction in size to increase our enjoyment of their unprotectedness: a light is burning in the window of a cottage at the end of the lane, and the child raises a tiny arm to indicate to the old man that they are Nearing Home. But, according to my reckoning, their scale has been tampered with to such an extent that they will have to endure upwards of another hour of weary trudging before they reach the safety of the cottage. (The year is 1872, and the painter is Atkinson Grimshaw, an almost forgotten Victorian.) My own anxiety to see the door close behind the old man and the child is no doubt due in part to the fact that the picture would be better without them, but I remain quite genuinely apprehensive for their safety and have an uncomfortable feeling that I am more interested in them than the painter was. The painter's interest was concentrated entirely upon a nightpiece with distant lights and I think the figures were put in to assure his clients that he was not in love with the dark; but they have served their purpose and no longer have to earn him a living: it would be a service to his memory if they could now be painted out.

The fascinating exhibition of thirty or so of his works at the Arthur Jeffress gallery charted the progress of an obsession which turned him into an equivocal follower of Whistler. His misty, gaslit cities were sufficiently factual to escape the attentions of *Punch's* versifiers, and none ever became '—a tract of mud,

one gas-jet glimmering there alone;

Above, all fog; below, all inky, flood,'

but he managed in his fashion to convey a sense of the enveloping atmosphere, and to expunge the anecdote from his work. Yet the distant figures remained signs for common sentiments: three of the pictures in the exhibition were of the same scene—a wet, moonlit road curving out of sight, with high walls on either side and a lighted house at the bend; the figure of a woman is 'nearing home' in two of them, but has been suppressed in the third, and suddenly the emptiness is fraught with disquiet; a meticulously painted scene becomes an image of a troubled and contradictory region of the spirit; and a nice piece of Victorian topography turns into a tract of the unknown, beyond rational justification.

There is a kind of no-man's-land of glittering, churned-up mud in the foreground of most of Grimshaw's pictures, and in the painting of Piccadilly, 1, with Burlington House on the left, the foreground has been emptied so abruptly that one can imagine for a moment that the traffic lights have switched to red. One would like to see what is going on beyond the sinister cluster of cabs that blocks the view of the Circus, and the clear stretch of road beckons one out of the Welfare State under a treacherously familiar sky.

There is little to arouse one's curiosity in the charming pictures by Robert Bevan recently exhibited at the Arts Council gallery. Bevan, who was a founder-member of the Camden Town Group, was possibly the first English artist to be influenced by Gauguin, and it is evident that he intended to organize colour in such a way that it would lend its own independent vitality to his subject matter, but he never quite pulled it off: his colour still looks mildly disconcerting in its irrelevance to the English scene, and its brightness and cleanliness filters the example of Gauguin through layer upon layer of diffidence, good taste and moral discipline. His hand-

ling of paint was not powerful enough to allow one to be indifferent to his choice of subject, and although Mr. Wood Palmer says in his preface that post-Impressionism provided Bevan with a 'technical screen behind which a private emotion could be indulged without fear of detection,' one doesn't have to be a Sherlock Holmes to discover that Bevan was a horse-lover, and that, when he painted a picture with a horse in it, it was livelier than one without. The picture of hay carts, for instance, painted in Cumberland Market in 1915, 2, would be a very dull affair

2

if the scruffy horse with its head in a nosebag were absent. Fortunately there were enough horses in his pictures of Cab Yards, Horse Sales and Markets in the Arts Council's thorough survey of Bevan's work to make it worthwhile.

The Gaudier-Brezska exhibition held at the Arts Council at the same time was a

3

startling contrast to the Bevan show. On the one hand there was the sober yield of many years of concentrated effort maintained at a rather low temperature, and on the other hand, the flourish and scrappiness of the work of a brilliant young man intent upon making the sparks fly and seeming to promise everything. Gaudier was highly gifted, and what is perhaps even more important he had the right kind of vitality and shrewdness to have made something of his gifts if he had survived the first world war. As it is, the exhibition is a reminder that it was handsome of him to choose London as the stage for his gay, facile opening survey of Parisian researches into form and colour. The drawing called 'Wrestlers,' 3 (I thought it was maybe a 'Mother and Child' before consulting the catalogue), demonstrates his verve and humour and the naïvety of his response to African wood carving.

The Academician Henry Lamb recently exhibited some pictures in the Reynolds room at the Leicester Galleries which were intended, I think, to be contributions to the neglected art of *genre* painting, but they gave me the impression that the artist was ordering the 'natives' about

4

with the unimaginative self-assurance of the average English film director. Frith might not have disapproved of the pretty young leading lady in 'Island Parliament,' 4, but the chalky colour, dilatory finish and

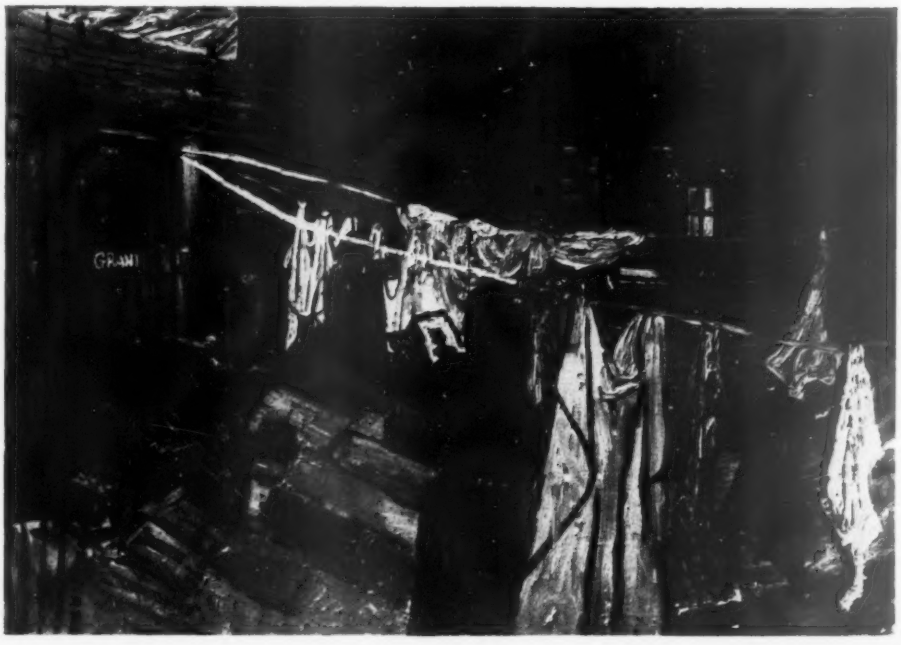
5

general lack of animation should be enough to make him turn in his grave.

John Craxton, exhibiting even less appropriately in the Hogarth room, is a more baffling case. Year by year his Greek sailors and goats, 5, become a little more frigid and comic, and the latest set may be said to have brought fifteen years or so of promise to a close. If he is working on yet another set, he will surely become eligible for a place among the lesser English Eccentrics.

John Bratby is one of the few English artists who occasionally strike a balance between image and paint. He has little imagination outside the act of painting, and when he 'thinks up' a subject the result is horribly theatrical, but he has an almost hysterical vitality and is at his best when his paint can revel in a scene of confusion or squalor. One of his finest achievements to date is the large painting of a 'Courtyard with Washing,' 6, included in his recent show at the Beaux Arts. Nothing is mitigated, but everything assumes the life of the paint, and the sordidness acquires a kind of grandeur.

Robert Melville



6

SKILL

A MONTHLY REVIEW
OF BUILDING TECHNIQUES & INDUSTRIAL DESIGN

1 interiors
2 design review
3 techniques
4 the industry

1

2

1 INTERIORS

ENTRANCE HALL AT WITTON, BIRMINGHAM

Architects, John and Sylvia Reid in association with Robin Day

Consulting Engineers, Clarke Nicholls and Marcel

This is a remodelling of the existing entrance hall at the general offices of the Metals Division of ICI. It provides a new reception lobby and waiting space, and a new staircase to the directors' offices on the first floor (the previous staircase was small and wrapped around a lift-shaft). All the existing walls were retained and this made a spiral staircase the only practical method in the space available. The staircase is 16 ft. 6 in. high and turns through 360 degrees; it is entirely without external support, all weight taken by the

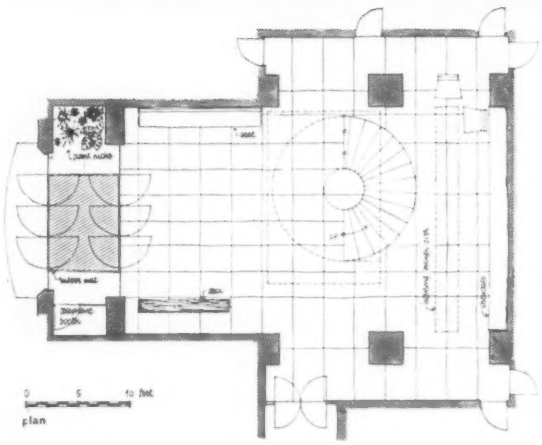
1 and 2, the entirely free-standing staircase in the hall of the ICI Metals Division office, Witton.

ENTRANCE HALL AT WITTON, BIRMINGHAM

3, the rear wall of the hall, which contains the showcases and is veneered in Japanese sen. 4, the new front doors of armourplate glass, and 5, the inner series of doors.

two 8½ in. diameter steel tubes of the staircase itself, a method which as far as is known has not been used on this scale before. The remodelling also included display cases and a selection of extruded sections made by the metals division which were set in one of the terrazzo slabs of the floor and ground off flat to form as it were a permanent catalogue page. Heating is by electric panels under the floor.

The panelled walls inside the entrance door are covered with grey vynide which is wrapped around each panel to leave a vertical joint between panels; the rear wall is veneered in Japanese sen and the flank walls are painted Vandyke brown. Ceilings are white; the lighting trough and all exposed steelwork is black. The stair treads are mahogany, grey-carpeted; the balusters are stove-enamelled white and the handrail is polished bronze. Sharp greens and blues have been used in the chair upholstery to contrast with the low-toned colour scheme used elsewhere.



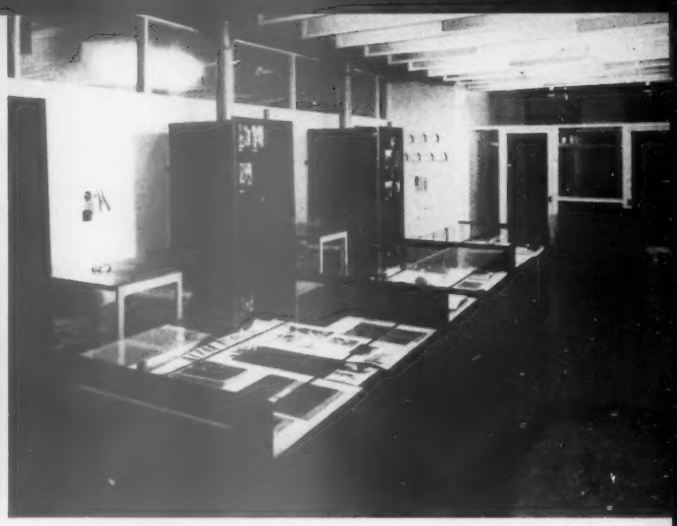
1, the hall seen through the entrance lobby.

ENTRANCE AND RECEPTION HALL AT BRADFORD

Architect: Trevor Dannatt

A part of the ground floor of the existing administration building (at one time a woollen mill with stone walls, timber floors and beams, and cast-iron columns) was required by Messrs. Lund Humphries as a new entrance with waiting space and screened bays for interviewing. More direct access from the street was required, together with new steps and a raised terrace, sheltered by a canopy.

The first entrance area is divided with door-height glazed screens into a lobby



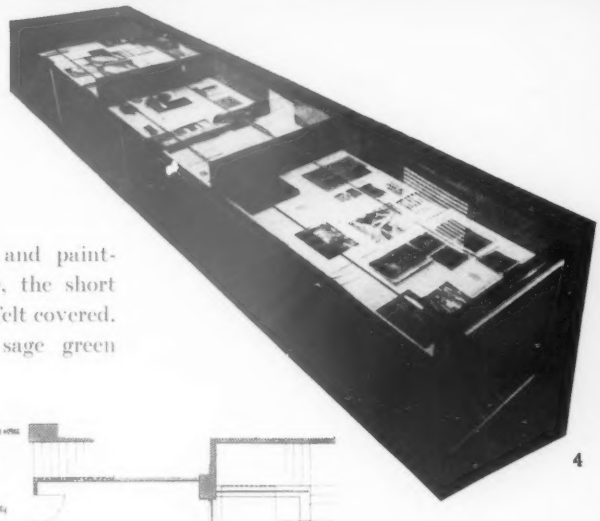
2, 3

2, from the waiting space, the end wall with collage by Eduardo Paolozzi composed of Lund Humphries printed material. 3, the hall looking back towards the entrance. On the left are the interviewing bays. The panels of the ceiling louvres are painted different colours. 4, the showcase is of three sections on a demountable undercarriage.

and into rooms for the commissionaire and telephone-receptionist. The main area comprises space for waiting, exhibitions space, and three interviewing bays corresponding to the structural grid and divided by L-shaped screens, the short arms of which, facing the main space, can be used for displays. Separation from the rest of the floor on the long side is by a solid wall up to 7 ft. high and a double glazed section above to the ceiling.

Artificial lighting is by 17 lines of ceiling lights each with a 5-foot fluorescent tube and a 60-watt tungsten, arranged alternately and screened by simple framed hanging louvres between each row and which give the effect of a lowered ceiling. The louvres are divided each into 3 sections painted different colours to an over-all rhythm, which are related to the richer colours in the collage by E. Paolozzi (constructed from miscellaneous Lund Humphries printed material) which forms a principal feature on the end wall. The specially designed showcase consists of three sections fixed on a demountable tubular undercarriage.

Walls are generally white and paintwork is light grey and white, the short panels to bays are 'rook-wing' felt covered. The flooring throughout is sage green marbled plastic tile.



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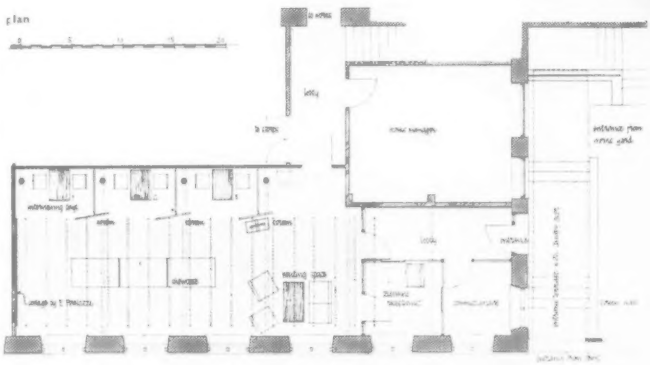


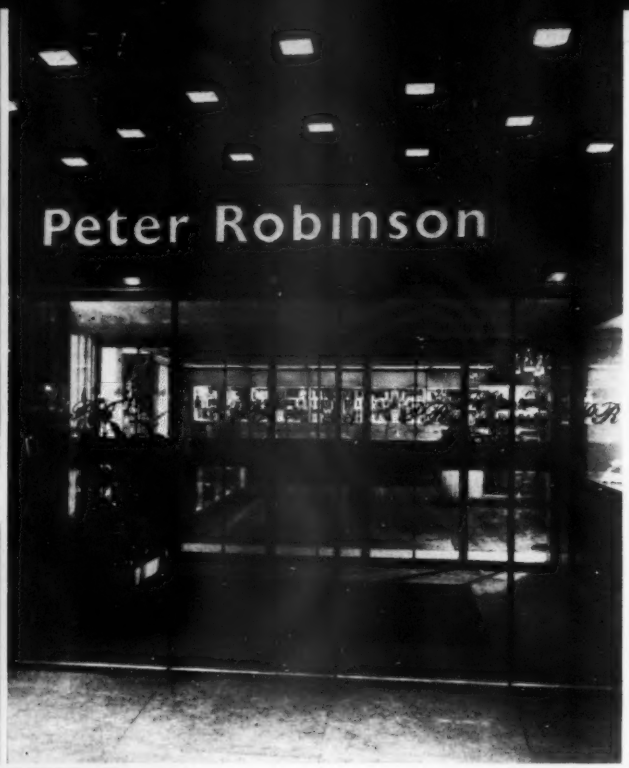
ENTRANCE LOBBY, CANOPY AND SIGN AT OXFORD CIRCUS

Designers: Misha Black and William Apps of Design Research Unit

The problem was to provide a new entrance lobby at Peter Robinson's store, with an inner and outer set of doors and to include a display window within the lobby. A new canopy projecting farther over the pavement than the old one and an illuminated sign above the entrance within the recessed arch of the main building were also required.

The lobby floor is of grey marble slabs with an inset mat of black rubber. The grey marble is carried through to the street to form a threshold. The ceiling is of suspended fibrous plaster, painted white and indirectly lit by cold cathode tubes. Outer doors and side screens are of armour-plate glass in stainless steel frames. The handles have teak grips and satin-chromium plated metal parts with the initials P.R. inscribed in gold leaf on the glass. The inner doors are of stainless steel with glazed areas of Georgian wired polished plate glass. The central horizontal band is polished black granite. Flanking the inner and outer sets of doors are areas of white Sicilian marble. Between these marble areas, on each side of the lobby, the wall finish is of teak veneer, $\frac{1}{8}$ in. thick on a solid hardwood core. The veneered area on the left of the lobby looking in from the street contains the escape doors and that on the right surrounds the display window, which is lined with natural-coloured leather panels and has a teak veneered floor and fibrous plaster ceiling.

The canopy consists of a steel frame fixed to existing steelwork above the entrance, and has a soffit of ribbed fibrous plaster painted pink with a series of spot lights set into it. The fascia is of white Sicilian marble, that above the outer entrance doors is of black granite. The

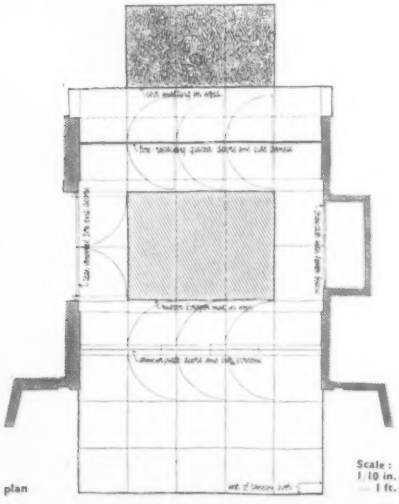


ENTRANCE LOBBY, CANOPY AND SIGN AT OXFORD CIRCUS

1, 2

3, 4

1, the canopy and sign. 2, under the canopy, showing the soffit of ribbed fibrous plaster. The letters of the name are bronze-sided and backed, superimposed on black granite. 3, the inner doors of wired glass framed in stainless steel. 4, the lobby, showing display window with ceiling similar to soffit of canopy.



superimposed letters of the words 'Peter Robinson' are constructed with black bronze sides and backs and perspex fronts, and are internally illuminated. The new sign is an oval 'box' with stainless steel sides with a white perspex front and the wording 'Peter Robinson' superimposed in blue perspex, the whole being supported on a steel tube fixed between the base and apex of the existing recessed arch.

2 DESIGN REVIEW

KITCHEN STORAGE

Trends in kitchen design are towards a closer integration of storage and other equipment, but many British products lack the sophisticated feeling for style which is characteristic of advanced American work.

Since the war housewives have enjoyed the fruits of much common-sense thinking in kitchen design. In the New Towns and other recent housing schemes the incoming householder has few worries concerning the purchase of kitchen furniture—the essentials are provided as an integral part of the house. Very often, because of the functional considerations which have determined the form and character of these fully equipped kitchens, they are the only parts of a house which suggest that the occupants have come to terms with the

problem of living in a modern society. Sitting and bed rooms too frequently reveal indiscriminate purchases and thoughtless arrangements.

Much credit for comparatively widespread development of these fitted kitchens is due to the dimensional standardization created by EJMA whose purpose-made kitchen storage is available on order for new houses and conversions. The householder, however, who wishes, himself, to furnish the kitchen of an older house can turn to the wide range of free-standing and unit storage furniture available on the market. Here a few manufacturers have taken the opportunity to transcend the stark functional simplicity of most kitchen units to provide a warmth and humanity which will make the kitchen environment pleasant to be in and stimulating to the eye. The American trend towards naturally finished wood in kitchen storage (mostly, it is to be regretted, in Colonial imitations), as well as in copper finishes and removable decorated covers for major appliances, shows a general recognition of this need for richness of surface treatment which, in turn, has grown out of the tendency to combine the functions of kitchen and dining room. Unfortunately the majority of British designs lack refinements of detailing and finish. Few can compare with the 'Hygena' and Kandya cabinets where contrasting colours and textures—paint with natural wood, plastics with glass—have been used by their designers with sensitivity and skill.

Storage in the kitchen is a composite problem and the jar that stands on the shelf is as important as the shelf itself. Plastics of all kinds have contributed to the design of food containers, while plastic covered wire has allowed an old material to be put to new uses in brightly coloured racks of many kinds. The refrigerator has become the most important single item, but even here its role as a free-standing box is likely to change so that it becomes more closely integrated with other storage units. Already several ranges of kitchen furniture provide for the inclusion of refrigerator units, although mostly the smaller capacity models. American appliance manufacturers have been working hard to make the kitchen the most attractive and lived-in part of the house. This is good sense in an increasingly servantless society.

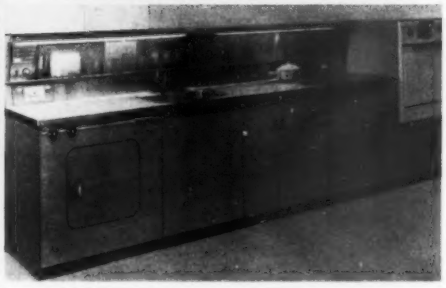
Few free-standing kitchen cabinets produced since the war have been without faults which, for the housewife, cause constant irritation. Metal cabinets have rusted where the paint has chipped; drop fronts, when open, have cut off access to drawers placed immediately underneath. Even where function has been adequately studied, glass fronts have appeared with banal leaded or screen printed patterns. The 'Hygena', **1**, presents a contrast: the success of the design rests on the complex treatment of the front surface—the contrasts of colour and texture, the bas-relief effect resulting from the recessed ventilating panels, the drawers which appear unsupported from below—a complexity which is, however, contained and kept in order by the simple and well proportioned structural carcass. Similar disciplines have guided the design of the Kandya buffet, **2**, where the use of natural wood for the carcass suggests a link with dining-room standards.

Unit furniture which can be built up in various combinations is the solution to kitchen storage which most housewives wish for but cannot always afford. The fault of most is a dull uniformity lacking focus or the relief of colour change. Of the metal kitchen units, the 'English Rose' range, **3**, in aluminium, is one of the most comprehensive. Cookers, refrigerators, waste containers, sink units and so on are available, all with the characteristic inward slope at the top to allow adequate knee room. Like the aluminium 'Leisure' cabinets, **4**, they have an appearance of straightforward efficiency but lack variety. The Heals units, **5**, have an elegance which stems from the pattern of coloured doorfronts each isolated by the white painted carcass frame. Cupboards beneath the working top are well clear of the floor, maintaining a sense of spaciousness that would be denied by floor standing units. Doors have touch catches, leaving them clear of knobs, but the generous depth of the

3, *'English Rose' units. Designer, F. G. Marshall. Maker, C. S. A. Industries Ltd. Height* **3** *ft.; width* **1** *ft.* **9** *in.; depth* **22** *in.* **4**, *Double sink unit. Maker, Leisure Kitchen Equipment Ltd. Height* **3** *ft.; width* **7** *ft.; depth* **1** *ft.* **9** *in.* £81 8*s.* **5**, *Storage units. Designer, J. Christopher Heal. Maker, Heal & Son Ltd. Height (basic units)* **1** *ft.* **9** *in.; depth* **1** *ft.* **6** *in.; width* **1** *ft.* **9** *in.* £5 19*s.* 6*d.* **6**, *'Hygena' units. Designer, George Féjer. Maker, Hygena Cabinets Liverpool Ltd. Work top height* **3** *ft.; widths* **5** *ft.* **3** *in. (sink);* **3** *ft.* **6** *in. (wall fitting);* **1** *ft.* **9** *in. (cupboard); depth* **1** *ft.* **9** *in.* £46 17*s.* 6*d. (sink unit);* £8 4*s.* 4*d. (wall fitting).*

1, *'Hygena' cabinet. Designer, George Féjer. Maker, Hygena Cabinets Liverpool Ltd. Height* **6** *ft.; depth* **1** *ft.* **3** *in.; width* **3** *ft.* **9** *in.* £26. **2**, *Buffet. Designer, Margaret Harvey. Maker, Kandya Ltd. Height* **6** *ft.; depth* **1** *ft.* **4** *in.; width* **5** *ft.* £25 17*s.* 10*d.* (*N.B. All prices mentioned include purchase tax.*)

1, 2



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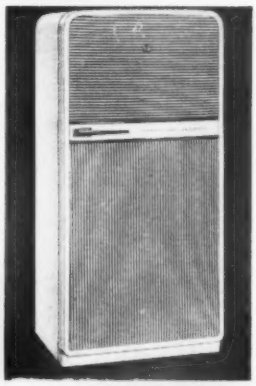


, 11, 12

13, 14

7, USA Experimental 'Kitchen of Tomorrow.' Maker, Frigidaire. 8, USA 'Holiday Kitchen.' Maker, Frigidaire. 9, USA 'Kitchen Centre.' Maker, General Electric. 10, refrigerator. Designer, Wilkes & Ashmore in conjunction with maker, Prestcold Refrigeration, Pressed Steel Co. Ltd. Height 3 ft. 1¼ in.; width 1 ft. 10½ in.; depth 1 ft. 10 in. £74 13s. 5d. 11, Refrigerator. Maker, Electrolux. Height 3 ft. 0½ in.; width 1 ft. 9¾ in.; depth 1 ft. 11¾ in.; capacity 2½ cu. ft. £41 18s. 3d. 12, USA refrigerator with removable door covers. Designer, Dave Chapman. Maker, International Harvester. 13, USA built-in refrigerator. Maker, Thermodor. 14, USA built-in refrigerator. Maker, Amana.

upper cabinets makes them appear top-heavy as well as being awkward in use. One way of overcoming this problem can be seen in the 'Hygena' units, **6**, where the wall-hung cabinets slope in at the base where they are less likely to cause a bang on the head.

Compared with the approach of some American appliance manufacturers, British firms have still a long way to go. Experiments in kitchen planning such as the Frigidaire 'Kitchen of Tomorrow,' **7**, represent realistic research into possibilities for the future and, through their value as publicity, stimulate public demand for advanced design. One result of such experiments is the Frigidaire 'Holiday Kitchen,' **8**, where dream-world fantasies have been translated into a practical commercial product. Here all the diverse equipment of the American kitchen has been integrated within a common package ready to be installed against the rough, unsurfaced walls of the room. In the background can be seen the eye-level control panel with knobs for the fold-down cooking tops immediately below. The panel also includes built-in radio, memo-pad, telephone and inter-com. Oven, refrigerator and deep-freeze are on the left and all units (based on a 2 ft. module) have an appearance of refined, austerely classical elegance. Similar problems have been solved on a somewhat smaller scale in the American General Electric 'Kitchen Centre,' **9**, where storage cupboards, washers, cookers and so on are co-ordinated within a single unit with a splash-back incorporating a control panel, radio, pull-out flexes and glass-fronted cupboards.

Refrigerators in Great Britain are becoming a major element of kitchen storage. Unlike models in the USA, however, smaller versions remain the most popular. Although some attempt has been made to introduce colour, white and cream finishes still predominate. The new Prestcold, **10**, and the Electrolux, **11**, show thoughtful and sensitive designs in the unpretentious manner which is essentially British. More work has been done in the USA on models designed to be built into the house. The use of clip-on covers is a method of giving more visual interest to the refrigerator door which has been used by several American firms and can be seen in the International Harvester model, **12**. The Amana, **14**, and the Thermodor, **13**, have a crispness of form and richness of surface interest derived from the use of copper (Amana) and stainless steel (Thermodor).

3 TECHNIQUES

CLOTHES DRYING

by Mary Ward

Year by year, it seems, there is a greater need to augment the excellent qualities of breeze and sunlight by some other more certain means of clothes drying. In many homes, of course, natural open air clothes drying is quite impossible and the form and efficiency of the substitute is a matter of very great moment.

Owners of combined washing machine and tumbler dryers have no problem, but for others three methods are now available. First the most rapid acting and the smallest appliance, the spin dryer, which extracts water by centrifugal force created by rapidly spinning (on a vertical axis) a perforated drum containing the wet clothes. This process uses no heat and so produces no steam, a virtue where condensation must be avoided. The second and slower means is the separate tumbler dryer, which slowly turns the clothes over inside a perforated drum through which warm air is forced. Neither of these two types of appliance can be used for airing purposes, and there are two possible criticisms of the methods they employ, the wear and tear on the clothes and the crushing of the fabric making ironing more difficult. Lastly, there is the drying cupboard relying entirely on convected warm air currents induced by gas or electric heaters. This method of drying is a little slower than the tumbler dryer and requires more cubic space. It is, however, completely silent, requires very little maintenance and the cupboard may also be used for airing purposes.

spin dryers

There is only one British made spin dryer on the market at the moment

1, *the Edy Minor.* 2, *the Creda 'Debonair.'* 3, *Morphy Richards spin dryer.* 4, *a Belgian spin dryer marketed by Chilton Electric Products.*

1

2

3

4

but several firms are importing machines.

1, the Edy Minor made in Holland and marketed by Edy (Great Britain) Ltd., is a spin dryer 19 in. high by 14 in. diameter, A.C. 220/250 volts, 100 watt induction motor, hand brake. Black and white vitreous enamelled steel interior and exterior. A load of 6 lb. dry weight of clothes can be dried at 1,460 revolutions per minute in about five minutes, a much faster method than the tumbler dryer. £29 17s. 1d.

2, the Creda 'Debonair' made by Simplex Electric Ltd., is a British made spin dryer, 28 in. high by $15\frac{3}{4}$ in. diameter, $18\frac{1}{2}$ in. overall diameter. For A.C. mains 200/210, 220/240 and 250 volts, 250 watt motor. Pressed steel case stove-enamelled white, with red trim, grey base. Pressed galvanized steel copper finished interior. The machine will dry a load of 6 lb. dry weight at 2,600 r.p.m. in 4 minutes. The raising and lowering of the lid controls the starting and braking. £37 16s. 0d.

3, the Morphy Richards spin dryer made in Holland, 25 in. high by 17 in. diameter, for A.C. or D.C. mains, 200/220 or 230/250 volts, has a 350 watt motor controlled by a foot pedal. The steel case is white paint coated inside and stove enamelled outside. This machine gives about the same results as the Creda, that is a load of 22 lb. wet clothes (approximately the same as 6 lb. dry weight) is ironing dry in 4 minutes. £35 16s. 7d.

4, a Belgian spin dryer, marketed by Chilton Electric Products Ltd. is $24\frac{7}{8}$ in. high by $11\frac{7}{8}$ in. diameter, a smaller capacity model (6 shirts being a full load) for A.C. or D.C. mains, 210/250 volts, 80 watt motor, 2,100 r.p.m. The case is of steel, vitreous enamelled grey mottle internally and white externally, with black plastic top and lid. £27 6s. 0d.

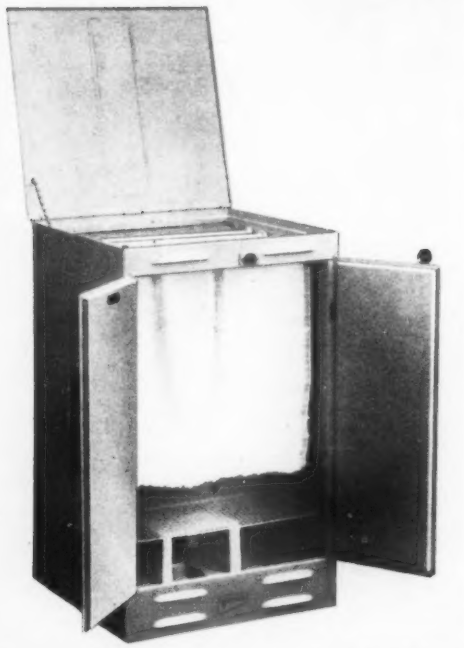
tumbler dryer

5, the first British made tumbler dryer on the market (as distinct from combined washing machine and tumbler dryer) the English Electric Model 4600, 36 in. plus $1\frac{7}{8}$ in. high by $26\frac{1}{4}$ in. wide by $26\frac{1}{8}$ in. deep. 200/210, 220, 230/240, 250 volts, A.C. Finned pressed steel drum, welded sheet steel cabinet finished white or cream stove enamel with grey toe strip. The pressed steel worktop has an inclined control panel. Clothes are loaded through the front door which contains the air inlet and the $2\frac{1}{2}$ kW. heater protected by a wire mesh screen. The automatic timer on the control panel is pre-set for any period up to 90 minutes drying time. When the pointer returns to zero both motor and heater are switched off. A thermal cut-out switches off the heater if the temperature becomes too high. The warm air is drawn from the door vent through the drum by a fan mounted behind it. The exhaust passes out through the fluff filter seen at the left of the control panel. The machine will take 16 to 18 lb. of wet clothes per load. 45 minutes for cotton to 90 minutes for blankets are approximate drying times. £61 18s. 9d.

5

5, *English Electric Model* 4600.

6, Victor Junior and 7, Victor standard model. 8, 9, Dryette. 10, 11, D.A.C. Drydenair.



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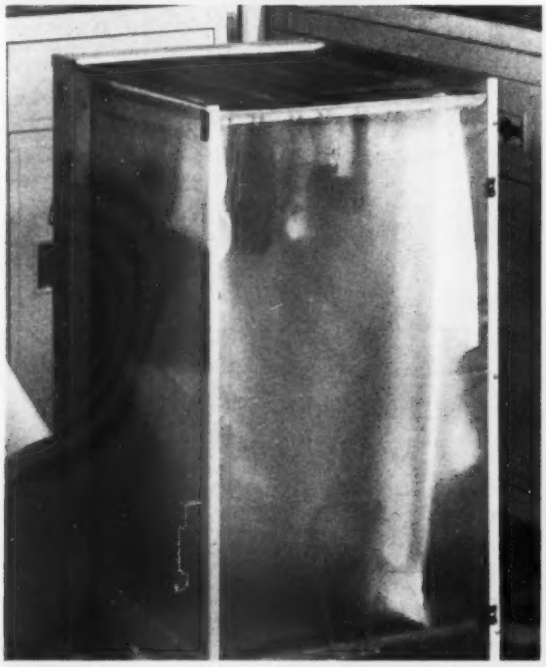

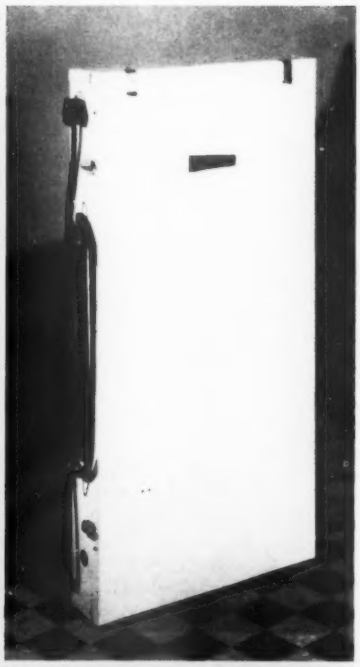

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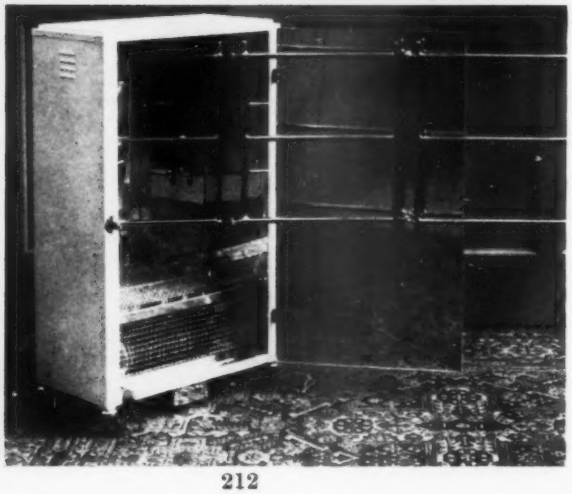

10, 11

cabinet drying cupboards

Several manufacturers are producing cabinet drying cupboards complete, thus involving no work on site, but the whole unit is subject to purchase tax and so the cost is relatively high. Two units are produced by Victor Manufacturing Co. Ltd. ***6,*** the Junior model, 36 in. high by 14 in. wide by 21 in. deep, fitted with four plastic rails, 1 kW. heater, £18 17s. 0d. Also available with gas heater at the same price.

7, the standard model, 36 in. high by 22½ in. wide by 21 in. deep is fitted with six rails and heated by two 750 watt elements independently switched, £29 or £32 16s. 9d. with stainless steel worktop. Gas heated model £27 8s. 1d. or £30 8s. 10d. with stainless steel worktop. These cabinets are sensibly designed to standard kitchen unit dimensions. They are double cased for insulation and stove enamelled cream or white or other colours to order. The electric models are available for A.C. or D.C. current, 200/250 volts.

8, 9, the Dryette, by the Coventry Radiator & Presswork Co. Ltd., is an interesting folding and portable cabinet, 36 in. by 3¾ in. wide by 18 in. deep when closed, 36 in. high by 21 in. wide by 18 in. deep when open. 1 kW. heater enclosed in spun glass sleeving, fitted with nine rails, eight of them removeable. Their position can be adjusted by sliding along the supporting frame. Slots are provided in the case for wall fixing. The folding panels are of pink, blue or green p.v.c. plastic sheet, metal parts of rust-proofed steel, enamelled cream. The cabinet is automatically switched off by closing and incorporates a pilot light. Mains supply A.C. 200/250 volts only, £21 10s. 0d.

10, 11, Model D.A.C. Drydenair, by Thomas Dryden & Sons Ltd., 40 in. high by 22½ in. wide by 13 in. deep, 800 watts electric heater, A.C. or D.C. mains, all voltages, is fitted with an extendable rail frame of chromium plated brass giving easy access to any article. Cabinet is rustless metal hard gloss enamelled cream or white, incorporating pilot light, £32 6s. 0d.

(shown on following page)

12, 13, a gas-heated unit by Sidney Flavel & Co. Ltd. is available either as a complete, free-standing cabinet or as an assembly for building into a corner or recess. The free-standing model is 79 in. high by 23⅝ in. wide by 24 in. deep, constructed of zintec sheet steel, finished cream stove enamel and fitted with eleven tubular Bakelite rails, £50 approximately. Parts for building-in from £26 9s. 4d. upwards.

14, two cabinets, No. 107A, 36 in. high by 21 in. wide by 15 in. deep, 1 kW. single heat, £20 3s. 9d., and No. 108A, 69¾ in. high by 21½ in. wide by 16 in. deep, 2 kW. three heat, £42 18s. 10d., made by Belling & Co. Ltd., of aluminium enamelled cream or white. The smaller model is also available in bronze finish. Both are supplied with removable wooden rods and fitted with pilot lights, A.C. or D.C. mains, all voltages.

15, Model F.54 in the Sno-white range made by J. Glover & Sons Ltd. for both domestic and institutional use. F.24, 72 in. high by 24 in. wide by

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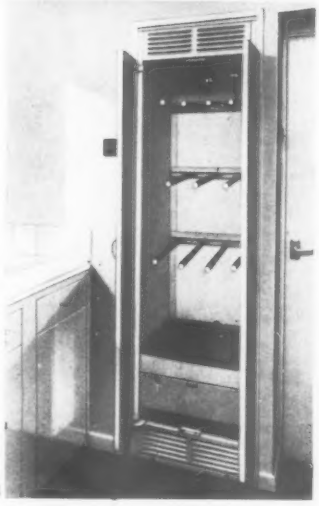

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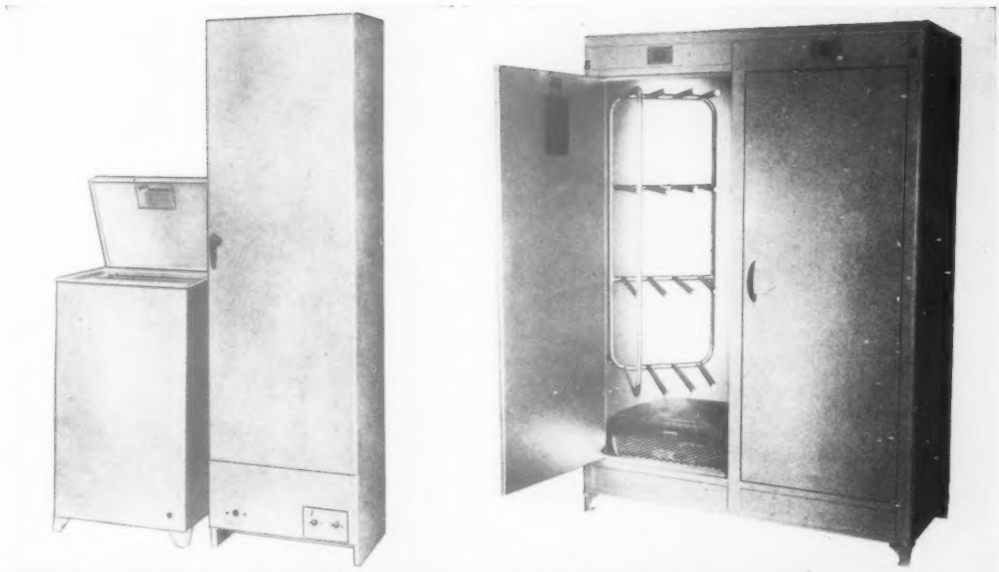

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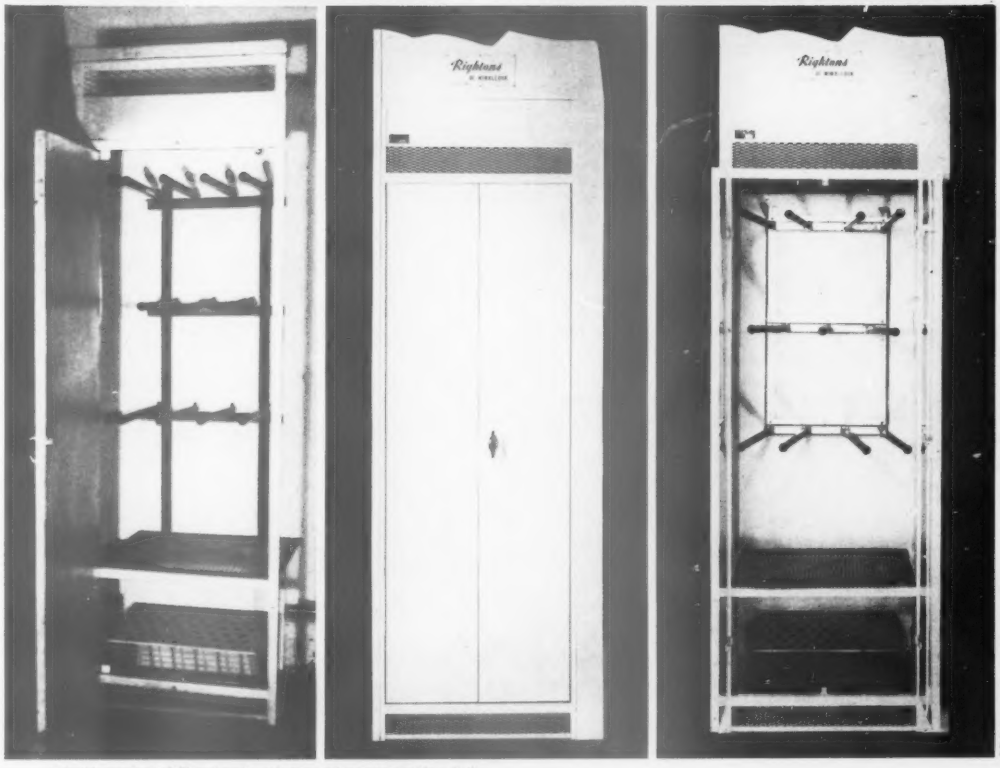

19, 20, 21

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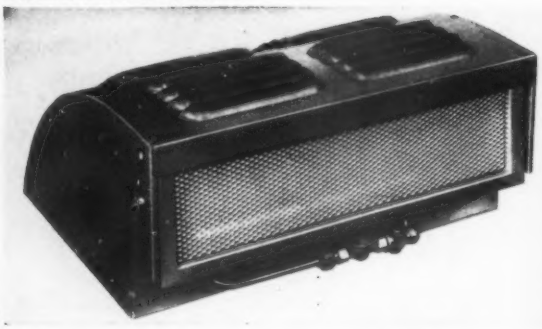
19 in. deep, 2.75 kW., £64 19s. 2d., gas £54 13s. 8d. F.27, 72 in. high by 27 in. wide by 25 in. deep, 3.5 kW., £73 0s. 8d., gas £61 13s. 2d. F.48, 72 in. high by 48 in. wide by 19 in. deep, 5.5 kW., £116 14s. 2d., gas £102 7s. 10d. F.5, 72 in. high by 54 in. wide by 25 in. deep, 7 kW., £138 14s. 6d., gas £119 12s. 10d. The last two are double cabinets which may be used half at a time. Electric models are for A.C. mains, 200/210, 220/230, 240/250 volts. All models are fitted with three heat switch and thermostatic control. Rustproof rails swing out, cabinets are double cased (airspace insulation) in zinc coated steel finished silver internally and stove enamelled eau-de-nil, cream or white externally.

16, Drying cabinet made by Creston Electric Ltd., 74 in. high by 20 in. by 20 in., 2¼ kW. Cream or white stove enamelled aluminium. Fitted with pilot light, A.C. or D.C. mains, 230/240 volts, £43 18s. 7d.

17, 18, a unit of the same type as 19 made by Clifford Products Ltd. Constructed in sheet metal with ground coat of grey enamel, 79 in. high by 26⅞ in. wide by 25⅜ in. deep, complete cabinet for fixing to wall, 9,900 B.Th.U./hour, £33 5s. 8d., 12,500 B.Th.U./hour, £34 3s. 4d. Minimum set of parts with metal door fitting in existing recess, 9,000 B.Th.U./hour, £25 0s. 5d., 12,500 B.Th.U./hour, £25 18s. 1d.

12, 13, *gas heated Flavel unit.* 14, *two cabinets by Belling & Co*
15, *Sno-white range, model F54, by J. Glover & Sons.*
16, *Creston Electric Co.* 17, 18, *Clifford Products Ltd.*
19, *Barralets Engineering Co.* 20, 21, *Righton & Sons Ltd.*



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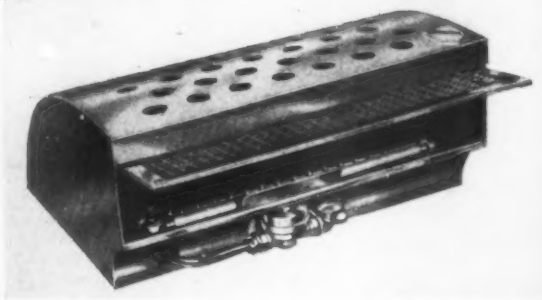

23

22, Clifford Products Ltd. heating unit. 23, Ranalah unit by Coventry Chromium Plating Co. 24, Thermovent heater by E. K. Cole Ltd. 25, electric unit by Hobourn Domestic Appliances Ltd.

24
25

(shown on previous page)

19, a similar gas-burning unit made by Barralets Engineering Co. Ltd., model C (20,000 B.Th.U/hour) for communal use and Model D (12,500 B.Th.U/hour) for domestic use. Constructed in angle and sheet iron, rust-proofed and finished in aluminium primer, supplied with eleven plastic covered steel rails independently swivelled. Designed to be installed in a cubicle of rendered 2½ in. breeze block or hollow pot if insulation is required, with floor of incombustible material ½ in. or thicker, 84 in. high by 26½ in. wide by 24 in. deep. A set of parts can be bought for use with own wood doors and side panels are available for corner positions. The prices are undergoing revision due to purchase tax changes.

20, 21, the same kind of unit made by Righton & Sons Ltd. constructed in sheet and angle steel primed one coat. Domestic model 12,500 B.Th.U. hour, communal model 20,000 B.Th.U./hour, standard size 82½ in. high by 25½ in. wide by 23 in. deep. Complete assembly including gas heater, approximate prices, £20 with single door, £21 with double doors, or all parts except heater approximately £13, for use with own electric heater.

If there is space available in a suitable position the built-in drying cupboard such as ***12, 13*** and ***16-21,*** has many advantages. Parts are manufactured ready for assembly and only the heater is subject to purchase tax. The effluent is best directed to the open-air particularly in the case of gas-heated units, though this is not essential provided the normal room ventilation is adequate to disperse the combustion products, and the decorative finish can withstand heavy moisture condensation, but it is often advisable where units of either cabinet or built-in types are used in banks, or where other gas-heated equipment is in operation at the same time as the cupboards. If ducted ventilation must be mechanically assisted the negative pressure must be carefully controlled and the manufacturers' recommendations should be sought.

separate heating units

If a specially designed drying cupboard is required, suitable heating units are obtainable separately. Examples include the following:

22, made by Clifford Products Ltd., 8½ in. high by 18 in. wide by 14 in. deep, 9,000 B.Th.U./hour supplied with inlet and outlet louvres 14 in. by 4½ in. and safety grid 24 in. by 24 in., £11 0s. 11d. Recommended cupboard size 19 in. to 22 in. wide by 18½ in. to 24 in. deep. 8½ in. high by 22 in. wide by 14 in. deep, 12,500 B.Th.U./hour, louvres 16 in. by 4½ in., safety grid 24 in. by 24 in., £11 18s. 7d. Recommended cupboard size 23 in. to 27 in. wide by 18½ in. to 24 in. deep.

23, the new Ranalah made by the Coventry Chromium Plating Co. Ltd. All units are 8½ in. high by 14½ in. deep. 18 in. wide unit supplied with louvres 14 in. by 4½ in. and safety grid 24 in. by 24 in. Recommended cupboard size 19 in. to 22 in. wide by 18½ in. to 24 in. deep, 9,000 B.Th.U./hour, £11 4s. 9d. 22 in. wide unit with louvres 16 in. by 4½ in., safety grid 28 in. by 24 in., 12,500 B.Th.U./hour, recommended cupboard size 23 in. to 27 in. wide by 18½ in. to 24 in. deep, £14 4s. 2d. 26 in. unit with louvres 20 in. by 4½ in., safety grid 36 in. by 24 in., recommended cupboard size 28 in. to 30 in. wide by 18½ in. to 24 in. deep, 15,000 B.Th.U./hour, £15 1s. 6d.

24, another electric unit, the Thermovent heater is made by E. K. Cole Ltd., 10 in. high by 17½ in. wide by 21 in. deep, for A.C. mains, 200/220 or 230/250 volts. A D.C. model is available to special order. The three heat switch gives 0.625, 1.25 or 2.5 kW. loadings, £10 9s. 8d.

25, an electric unit made by Hobourn Domestic Appliances Ltd., 10 in. high by 19 in. wide by 21 in. deep. Designed for operation in a cupboard approximately 24 in. by 24 in. by 72 in. high and suitable for installation in the Clifford, Flavel or Righton cupboards, 2½ kW., 230 volts, with single heat control £9 18s. 2d., or with three heat control £11 0s. 6d.

list of firms mentioned:—

English Electric Co. Ltd., Queens House, Kingsway, London, W.C.2. Edy (Great Britain) Ltd., 173 Sloane Street, London, S.W.1. Simplex Electric Co. Ltd., 26/28 Binney Street, London, W.1. Victor Manufacturing Co. (Greengates) Ltd., New Line Works, Greengates, Bradford. Coventry Radiator & Presswork Co. Ltd., Canley Works, Coventry. Thomas Dryden & Sons Ltd., Grimshaw Street Foundry, Preston. Belling & Co. Ltd., Bridge Works, Enfield, Middlesex. Creston Electric Ltd., 37-39 Thurloe Street, London, S.W.7. J. Glover & Sons Ltd., Groton Road, Earlsfield, London, S.W.18. Sidney Flavel & Co. Ltd., Eagle Foundry, Leamington Spa. Barralets Engineering Co. Ltd., Lee Church Street, London, S.E.13. Clifford Products Ltd., Imperial Works, Friar Street, Wednesbury, Staffs. Righton & Sons Ltd., Progress Works, Lombard Road, South Wimbledon, S.W.19. The Coventry Chromium Plating Co. Ltd., Godiva Street, Coventry. Hobourn Domestic Appliances Ltd., Strood, Rochester, Kent. Morphy Richards Ltd., 6 Conduit Street, London, W.1. Chilton Electric Products Ltd., 19 Old Queen Street, London, S.W.1. E. K. Cole Ltd., 5 Vigo Street, London, W.1.

4 THE INDUSTRY

Under-floor Electric Heating

Most architects are familiar with electrical under-floor heating in name, though few have experience of it. A fear many people have is that it will not prove sufficiently sensitive to our sudden changes of temperature; that the 'fly-wheel' effect of the high thermal capacity floor will leave you over-warm when the weather suddenly turns milder and—worse still—not warm enough when it does the other thing. Experience goes to show, however, that our temperature changes are seldom violent enough to make this disadvantage apparent, though it is probably wise to provide an alternative radiant heat source to give a flood of 'sensible' heat to people coming indoors on a very cold day. The other common objection is that electricity has the reputation of being an expensive medium for space heating and it is presumed that this—the most 'luxurious' form of it—must be more expensive than ever. Since under-floor heating takes current at 'off-peak' periods and since off-peak rates vary from one electricity board to another, the actual cost varies in different parts of the country, being least in the area of the South of Scotland Board. Nevertheless, a recent investigation published in *The Architects' Journal* (December 6, 1956), comparing the costs of heating a small house in the London area by five alternative methods, showed that though the running cost of electric under-floor heating was greater than any of the other four methods, the difference was not considerable and the installation cost was so much less than that of any other system giving a comparable service that, if you put running and first costs together, it proves the cheapest during the first twenty years—by which time, presumably, the balance of cost will have shifted in electricity's favour. Since this form of heating is feasible it is interesting to notice a new version which has been put on to the market by Thermodare, the firm which pioneered electrical storage heaters in this country. A characteristic of the Thermodare system is that the element is carried in a heavy p.v.c. sheath and is, therefore, easily withdrawn in the (unlikely) event of damage. It is also claimed to be considerably cheaper than other systems

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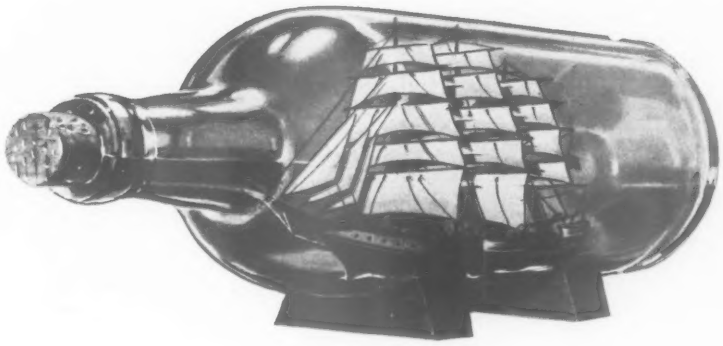

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on the market, costing only about £12 per kilowatt.

Thermodare (*Great Britain*), *York Mansion*, 94-98 *Petty France*, *London*, *S.W.*1.

Aluminium sash windows

One of the latest additions to the architect's window repertoire is a range of vertical double hung sashes in aluminium by Crittalls. 'Range' is perhaps not quite the right word as the windows are made to dimensions specified by the architect. The windows are made in two types: the smaller sashes (up to 7 ft. by 4 ft.) may be hung on 'Unique' spiral balances, but larger sashes (up to 8 ft. by 5 ft.) are hung on cast-iron weights. The latter (which we illustrate in the photograph) are therefore very similar in general layout to the traditional wood sash. Notable differences are that access to the mechanism is by the removal of cover plates at head and jambs and the use of a sliding grip low down on the right hand jamb to control the upper sash. On both types the sashes are fully weatherproofed: with p.v.c. fillets on horizontal rails and spring guides in the vertical channels.

The Crittall Manufacturing Co. Ltd., *Braintree*, *Essex*.

The Crittall Aluminium double-hung sash window.

Staff location

Architects who have been appalled (as all should be) at the obnoxious signals customary with staff location systems in this country will be interested to hear of an electronic system which has been developed by the Multitone Electric Co. Ltd. for St. Thomas's Hospital. Briefly, a wire loop is run round the outside of the building and all those liable to be called (up to 336 of them) carry a receiver in their pocket which is not unlike a fountain pen to look at, being 5⅜ in. long by 1⅛ in. diameter (see illustration). When anyone is wanted his receiver starts a discreet but unmistakable buzz. The cost of this system is described as competitive, and apart from its inherent neatness it has a pull over any visual system in that staff can still be located if they are just outside the building.

Multitone Electric Co. Ltd., 12-20, *Underwood Street*, *London*, *N.*1.

Multitone staff location receiver. 5⅜ ins. long, 1⅛ ins. diameter weight; 5oz.

Fluorescent light fittings

From the architect's point of view one of the troubles with fluorescent light fittings has always been to get reasonably continuous lighting, particularly in the long direction—each fitting has always required so much elbow room. Thorn Electric, aided by John Reid, A.R.I.B.A., have enormously reduced the hiatus between lamps in their Atlas Atlantic range by adopting a squarish section in the chassis (thus allowing the placing of lights close alongside one another) and by adopting a neat bi-pin lampholder at the ends, designed to allow fittings to be butted end to end with a hardly perceptible break in the line of light. Lamps can be lifted out by one man instead of two and a further visual refinement is the use of a black detachable end plate for use where the fitting stands alone or where a

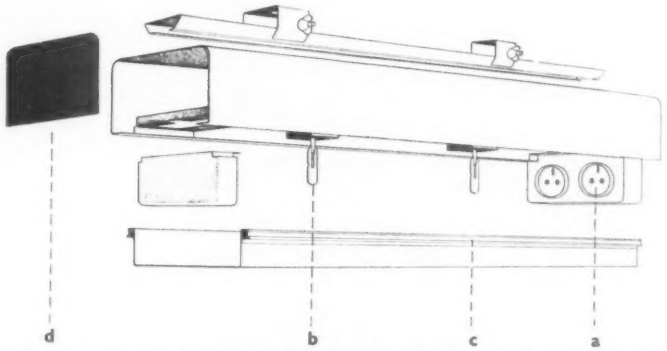

Diagram of the Atlas Atlantic chassis. a, spring loaded bi-pin lampholder; b, toggle for rapid fixing of reflectors, batten plates, etc.; c, snap-in perspex diffuser; d, detachable black plastic end plate.

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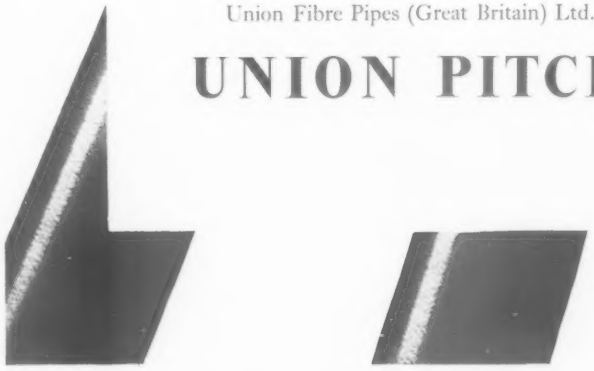

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line of fittings ends. This gives a positive visual stop and is much to be preferred to the equivocal shadowy forms with which fittings usually terminate.

Thorn Electrical Industries Ltd., 233, Shaftesbury Avenue, London, W.C.2.

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School at Camden Town. *Architects:* Stillman & Eastwick-Field. *General contractors:* G. E. Wallis & Sons. *Heating and hot water services:* Fred G. Alden Ltd. *Cold water and internal plumbing:* G. N. Haden & Sons. *Electrical installation:* Grierson Ltd. *Gas installation:* North Thames Gas Board. *Goods lift:* Hammond & Champness Ltd. *Asphalt roof and floors:* Val de Travers Asphalt Ltd. *Metal windows:* John Thompson Beacon Windows Ltd. *Terrazzo and concrete tile floors:* Art Pavements & Decorations Ltd. *Cork floor:* Armstrong Cork Co. *Linoleum floors:* The Lino Tile Co. *Wood block floors:* Horsley Smith & Co. (Hayes). *Fitted carpet:* Catesbys Ltd. *Portland stone floor:* Bath & Portland Stone Firms Ltd. *Cement glaze:* Robb's Cement Enamel Finishes Ltd. *Plasterings:* E. E. Cheeseman & Sons. *Polishings:* J. R. Beadon Ltd. *Sign writing:* The Lettering Centre. *Glazings:* Faulkner Green & Co. *Burglar alarm:* Burgot Rentalls Ltd. *Cloakroom fittings:* Comyn Ching & Co. *Blackout blinds:* Accordo Blinds Ltd. *Hall curtains:* F. O. Williams & Co. *Blackout curtains:* Tidmarsh & Sons. *Staircase H.S. balustrades:* S. W. Farmer & Son. *Staircase C.I. balustrades:* E. S. Margrie & Sons. *Concrete rooflights:* Luxfer Ltd. *Dry rot elimination:* Richardson & Starling Ltd. *Roller shutters:* Shutter Contractors Ltd. *Brick and stone cleaning:* Szerelmey Ltd. *Timber fencing:* W. A. Skinner & Co. *Chain link fencing:* Penfold Fencing & Engineering Ltd. *Galvanized H.S. railings:* Bayliss Jones & Bayliss Ltd. *Tar paving:* Wainwright Paving & Contracting Co. *Grass seeding and tree planting:* St. Mary's (Contractors) Ltd. *Precast concrete beams and columns:* Concrete Development Co. *Prestressed precast floor and roof beams:* Atlas Stone Co. *Precast exposed aggregate beams:* Mono Concrete Co. *Facing bricks:* Eastwoods Sales Ltd. *Slate cills:* Bow Slate & Enamel Co. *Sanitary fittings:* B. Finch & Co.; Adamsez Ltd. *'Celotex' highlight ceiling boards:* C. F. Anderson & Son. *Sectional water tank:* Frederick Braby & Co. *Galvanized steel cistern:* Richard Thomas & Baldwins Ltd. *Shower cubicle rails:* Stitsons Sanitary Fittings Ltd. *Paint:* Imperial Chemical Industries Ltd. *Acoustic tiles:* Uniton Ltd. *Ironmongery:* Yannedis & Co. *Aluminium louvred vent:* Greenwood & Airvac Ventilating Co. *Hall ventilation grilles:* Colt Ventilation Ltd. *Sliding door gear:* E. Hill Aldam & Co.; British Trolley Track Co. *Loudspeakers:* Goodman Industries Ltd. *School name board:* City Display Productions Ltd.

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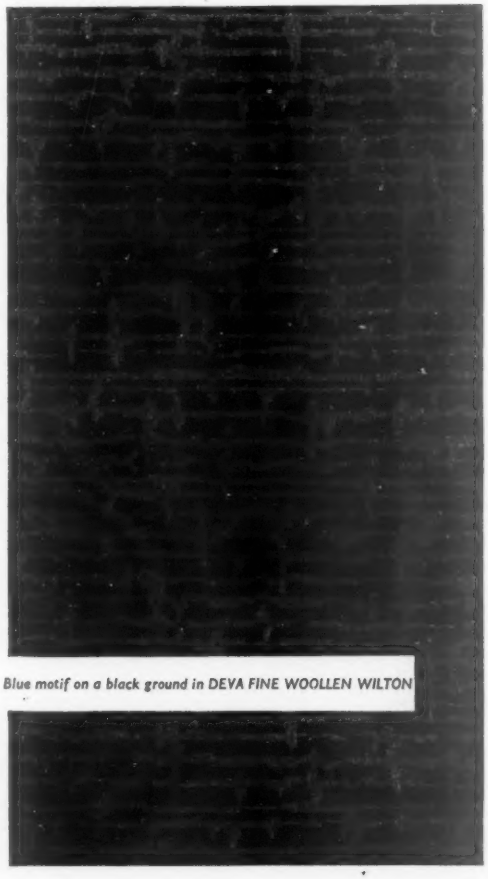

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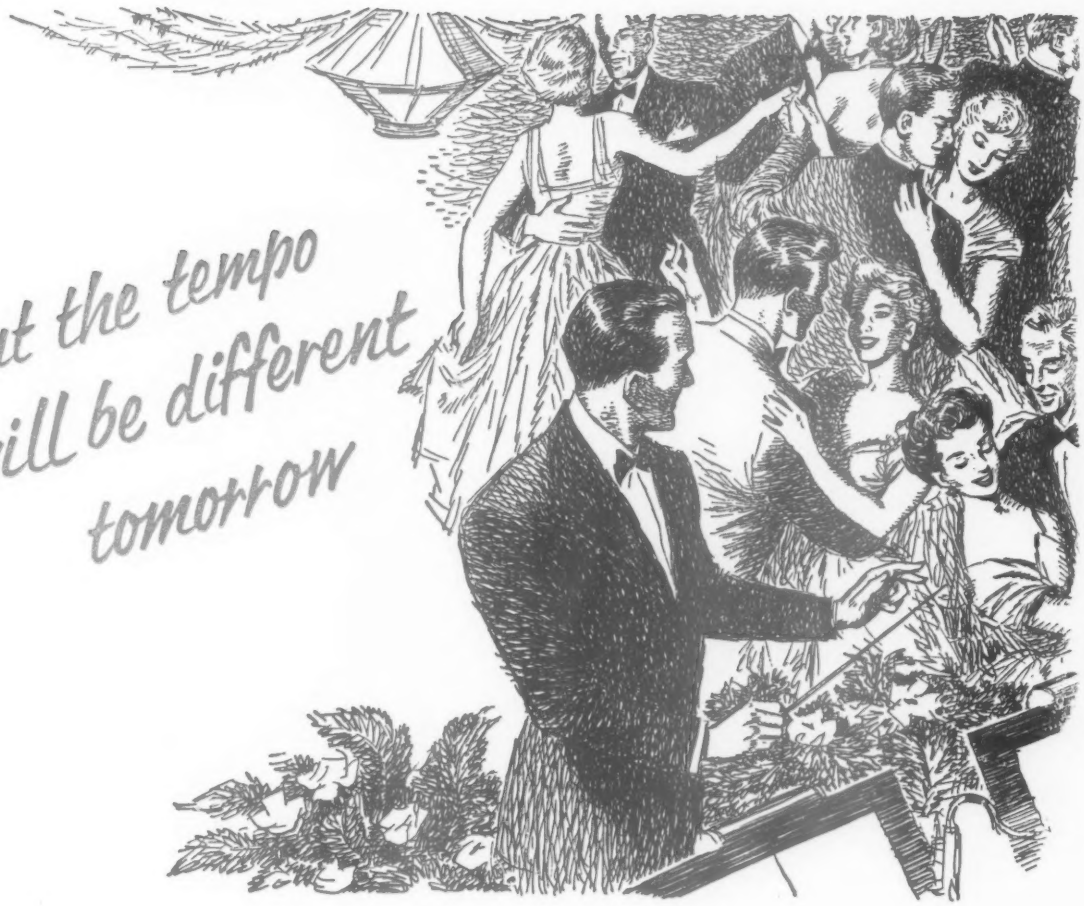

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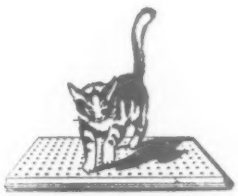

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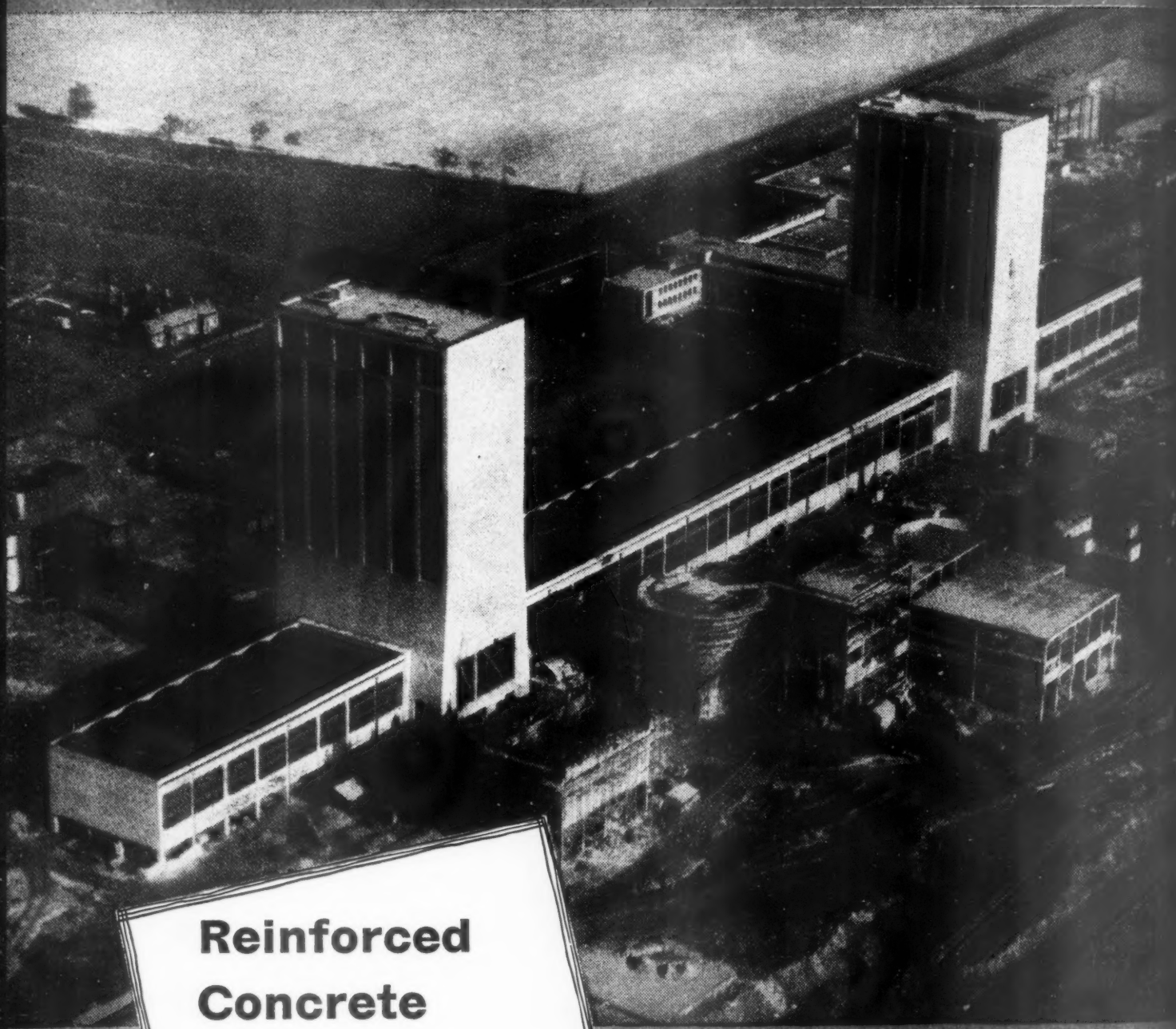

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